The Opportunity Cost of Ignorance: Examining the state of American Financial Literacy

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ABSTRACT

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In the modern era, individuals have unprecedented access to a wide variety of financial information and financial products. Technological innovation allows for great opportunity, access, and freedom of choice within financial markets, but at the same time, requires individuals to take greater responsibility for personal financial management, and perhaps, leaves room for exploitation. Acknowledging the rapidly evolving and complex nature of the modern financial industry, this thesis analyzes key questions and trends regarding the state of American financial literacy. The topic is addressed in a series of three chapters. The first explicitly defines the term "financial literacy" and communicates why promoting financial literacy is more important today than ever before. The second chapter discusses various sources of information—the education system, employers, media outlets, and financial firms themselves—to highlight how an individual might gather and utilize financial information in order to advance their own state of financial literacy and, ultimately, make financial decisions. The final chapter of this paper explores the relationship between financial literacy and government agencies, like the Consumer Financial Protection Bureau, by highlighting three case studies—the 2008 Financial Crisis, LIBOR scandal, and Wells Fargo Bank's account fraud—in order to reveal potentially troubling links between financial literacy, Main Street, and Wall Street. Ultimately, this paper finds the state of American financial literacy to be troubling, and disappointing at best. While progress has been made, particularly since the Financial Crisis, the need for additional research, broader awareness, and increased accountability with respect to financial literacy advancement efforts remains great.

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INTRODUCTION

In 2015, the National Federation for Credit Counseling (NFCC) found that 91% of American respondents were "very or somewhat confident that the last time they made a big financial decision (such as picking a car, or refinancing their mortgage), they made the right choice."[1] This same NFCC report also found that 45% of US adults gave themselves a letter grade of C, D, or F in terms of their knowledge of personal finance, and 75% of those polled agree and they could greatly benefit from the answers to everyday financial questions.

In the modern era, individuals have unprecedented access to a wide variety of financial information and financial products. Valued information like fair market prices, analyst opinions, macro and micro trend analysis, and corporate earnings reports are all publically and instantly available for Americans to access from their living rooms and cell phones. But at the same time, this great opportunity, access, and freedom of choice granted in financial markets also demands greater individual responsibility, and perhaps, leaves room for exploitation.

To get a better sense of the lack of understanding and widespread financial illiteracy present before, during, and after the Financial Crisis, consider producer Andrew McKay's onscreen adaptation of Michael Lewis' book, *The Big Short*.[2] Both the book and film tell the stories of select hedge fund managers and traders who successfully bet against the giant housing bubble, and in turn, profited hugely from the economic chaos that became known as the Global Financial Crisis. But in order to make a box office hit about finance, McKay realized he needed to bridge "a giant gap between the professionals and the experts and average people," who feel "they're too dumb, or banking is boring."[3] So in an attempt to both grab the attention of and educate these "average people," McKay filmed actress Margot Robbie in a bubble bath while explaining the concept of mortgage-backed securities and featured singer Selena Gomez playing blackjack while explaining Collateralized Debt Obligations (CDO's). By no means does McKay's film exhaustively or fairly explore all causes and effects of the Crisis. But it was not necessarily intended to do so. As McKay made clear in a Wall Street Journal interview, his idea for the film was to "kick in the pants the conversation about the economy and finance, the collapse, and regulation, and [make] people a little less intimidated by the subject."[4]

Acknowledging the rapidly evolving and complex nature of the modern financial industry, this thesis analyzes key questions and trends regarding the state of American financial literacy. The topic is addressed in a series of three chapters. The first explicitly defines the term "financial literacy" and communicates why promoting financial literacy is more important today than ever before. The first chapter also summarizes existing literature and presently employed methodologies used to measure financial literacy levels. The second chapter discusses various sources of information—the education system, employers, media outlets, and financial firms themselves—to highlight how an individual might gather and utilize financial information in order to advance their own state of financial literacy and, ultimately, make financial decisions.

The third and final chapter of this paper explores the relationship between financial literacy and the dreaded "R-word," (regulation) by highlighting three case studies—the 2008 Financial Crisis, LIBOR scandal, and Wells Fargo account fraud—in order to reveal potentially troubling links between financial literacy, Main Street, and Wall Street.

Chapter I: What is financial literacy?

Setting the Stage

Financial literacy refers to an individual's ability to understand basic financial concepts in order to make informed financial decisions benefiting their own short and long-term interests.[5] Financial literacy is a crucial component of financial capability—a multi-dimensional concept encompassing a combination of knowledge, resources, access, and habits.[6] Financial literacy and capability are both key to successfully participating in and contributing to the national economy, achieving and meeting basic needs and goals, and developing successful investment strategies to support retirement.

In academic and professional circles alike, a general consensus exists that the majority of Americans are far too financially illiterate.[7] One of the most comprehensive and far-reaching attempts to confirm this consensus was the 2015 SP500 Global Financial Literacy Survey. The survey included over 150,000 nationally representative and randomly selected participants from 140 world economies. These participants were interviewed and then asked to answer financially specific questions included on the 2015 Gallup World Poll.[8] Organizations like the World Bank Development Research Group and the Global Financial Literacy Excellence Center at George Washington University frequently reference insights from the SP500 Financial Literacy survey.

In order to be deemed "financially literate" by the SP500 survey's standards, participants needed to correctly answer at least three of four questions related to concepts like *risk diversification, inflation, numeracy, and compounding interest*. The table below summarizes each concept tested by the SP500 Global Financial Literacy Survey, the potential answer choices, and the correct response:

Concept	*Risk Diversification*	*Inflation*	*Numeracy*	*Compound Interest*
Question	Suppose you have some money. Is it safer to put your money into one business or investment, or to put your money into multiple businesses or investments?	Suppose over the next 10 years the prices of things you buy double. If your income also doubles, will you be able to buy less than you can buy today, the same as you can buy today, or more than you can buy today?	Suppose you need to borrow 100 US dollars. Which is the lower amount to pay back: 105 US dollars or 100 US dollars plus three percent?	Suppose you put money in the bank for two years and the bank agrees to add 15 percent per year to your account. Will the bank add more money to your account the second year than it did in the first year, or will it add the same amount of money both years?
Answer Choices	One business/investment; Multiple businesses/investments; Don't know; Refused to answer	Less; The same; More; Don't know; Refused to answer	105 US dollars; 100 US dollars plus three percent; Don't know; Refused to answer	More; The same; Don't know; Refused to answer
Correct Answer	Multiple businesses/investments	The same	100 US dollars plus three percent	More

The 2015 SP500 Global Financial Literacy survey results are sobering: worldwide, only one in every three people qualified as financially literate. The survey questions regarding simple interest calculations and inflation were more likely to be answered correctly while risk diversification proved a harder concept for people to grasp; just 35% of all sampled adults correctly answered the risk diversification question. The survey also revealed that financial literacy levels vary by and within sub-groups for a given country.

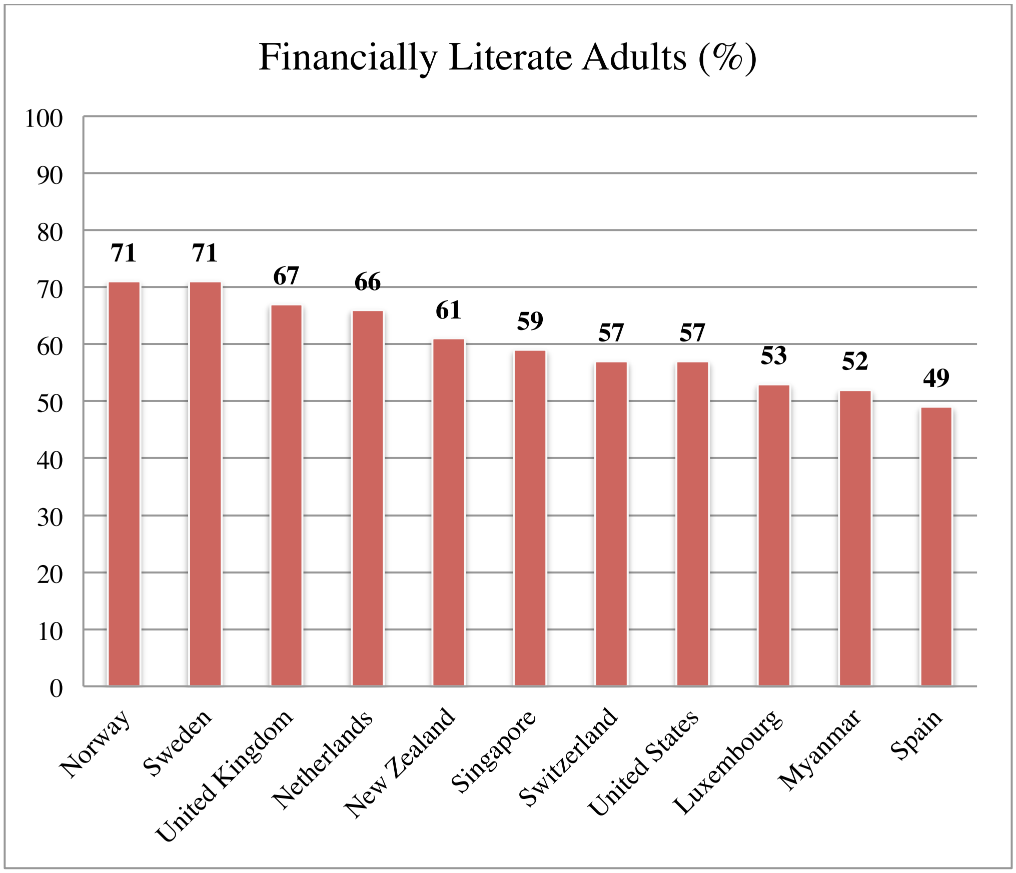


Figure 1: Percent of Financially Literate Adults (Source: SP500 Global Financial Literacy Survey)

Specifically within the United States, 57% of those polled passed the SP500 Global Financial Literacy test.[9] And with the global financial literacy rate at 33%, the US's 57% passing rate doesn't, at least initially, appear particularly concerning. Yet when the scale and structure of the US economy—particularly its reliance on household consumption expenditures and savings to support gross domestic product (GDP)—and the shockingly low difficulty associated with the four questions used in the SP500 survey are considered, the United States' success rate begins to seem more like a failure.

Of the eleven countries featured in the graph above, the US has, by far, the most robust economy.[10] US GDP is the third highest in the world, with 68.4% of GDP derived from household consumption, 17.7% from government expenditures, 16.2% from business investments in fixed capital, 12.6% from exports, and -15.5% from imports.[11] None of the other highlighted countries' economic success (GDP) is more deeply tied to and dependent upon household consumption and savings than the United States':[12]

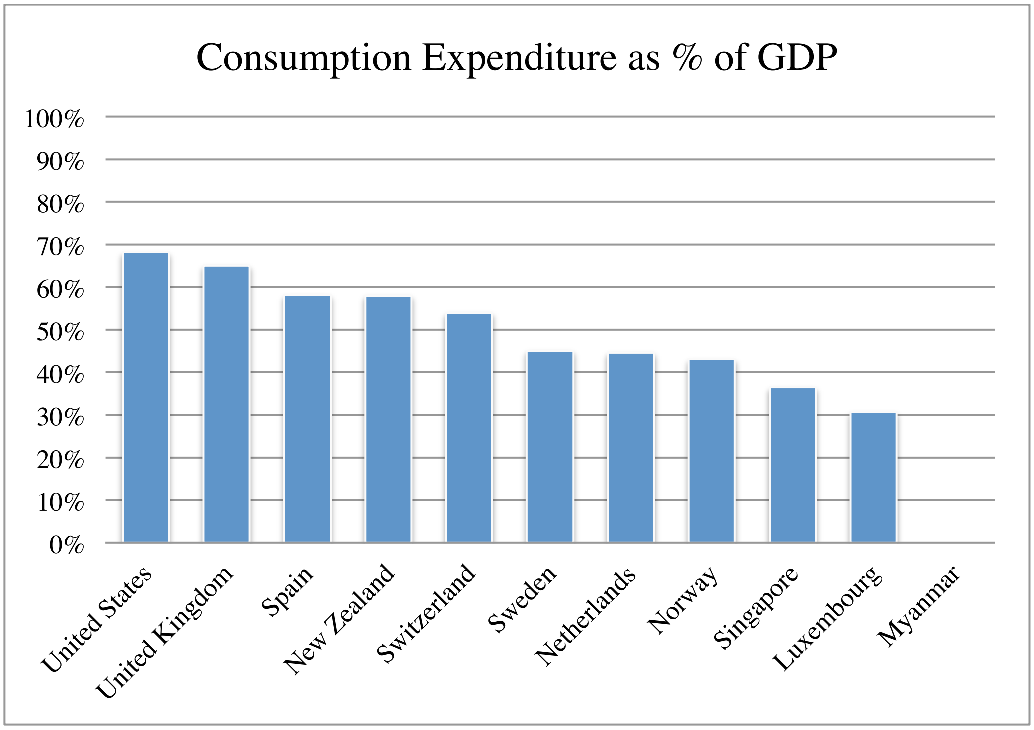


Figure 2: Household Consumption Expenditure as Percent of GDP (Source: The World Bank, OECD)

This is not a paper that dissects the components of GDP in order to make economic arguments for or against this significant reliance on consumption. No "ideal" GDP component allocations are argued. Beyond this acknowledgment itself, no further discussion of whether GDP calculations are necessarily fair, accurate, or even appropriate measures of global "rank" is presented. This paper is about American financial literacy.

With that said, it must be noted that the terms "consumption" and "consumption expenditure" are two distinct concepts. Consumption refers to the *use* of goods and services. Consumption expenditure refers to the aggregated *purchase* of goods and services that facilitate consumption. In other words, you consume a cup of coffee, but your consumption expenditure of $4.99 on a Starbucks coffee enabled the consumption and contributed to overall GDP.[13] The consumption expenditure of $4.99 did not occur in isolation, as it was preceded by a set of necessary financial decisions and considerations. For example, can you afford to pay $4.99 for coffee? Should you, instead, make the coffee at home? Would your boss be more likely to grant you a key project assignment if you spend a bit today in order to surprise them with a coffee too? Or perhaps you ask yourself more Keynesian questions like, are the contents of the cup worth $4.99? And, does a similarly convenient competitor offer a valid substitute for less?

The coffee purchase example illustrates the fact that even if a consumer does not physically sit in front of a loan officer, open an investment account, apply for a mortgage, or shop for a new car online, consumers still face an uncountable number of financial decisions on a daily basis. Consumers, not necessarily policy makers or the private sector, ultimately make crucial consumption expenditure decisions. Consumers, therefore, dictate the 68% of GDP that is derived from consumption. Therefore, the fact that 43% of the population responsible for 68% of GDP is unable to answer three of four extremely basic financial questions is concerning.[14]

Even if 57% of the US adult population can answer four basic diversification, numeracy, interest, and inflation questions, do they really deserve to be deemed financially literate? The second reason the 57% "success" rate should not inspire false confidence is that, in terms of complexity, concepts like simple interest, diversification of risk, interest, and inflation pale in comparison to those needed for successful modern money management. Navigation of today's financial environment requires higher-level applications of these simple concepts—stocks, bonds, mortgages, pension plans etc. – which may be complex, but are integral components to basic consumer finance and American society as a whole. In order to achieve long-term financial security and freedom, individuals need to fully grasp how various financial concepts interact, evolve over time, and frequently depend on the value of other assets in order to make sound financial decisions.[15]So what does it really mean to understand the concepts of diversification, inflation, numeracy, and compounding interest? Put another way, what does someone who correctly answered the SP500 questions understand that a financially illiterate respondent does not?

While the following glossary explanations from *Personal Finance for Dummies* may not be the utmost authoritative or academically precise, they do serve as a useful starting point from which a basic understanding of often complex and abstract concepts can be built:[16]

<u>Risk Diversification</u>—"If you put all your money into one type of investment, you're potentially setting yourself up for a big shock. If that investment collapses, so does your investment world. By spreading (diversifying) your money among different investments – bonds, U.S. stocks, international stocks, real estate, and so on—you ensure yourself a better chance of investing success and fewer sleepless nights."[17]

<u>Inflation</u>—"The technical term for a general rise in prices in the economy. Inflation usually occurs when too much money is in circulation and not enough goods and services are available to spend it on. As a result of excess money, prices rise. A link is present between inflation and interest rates: If interest rates don't keep up with inflation, no one will invest in bonds issued by the government or corporations. When the interest rates on bonds are high, it usually reflects a high rate of expected inflation that will eat away at your return."[18]

<u>Compound interest</u>—Compound interest and numeracy are not explicitly covered in *Personal Finance for Dummies,* so alternative sources of definition are required. According to Investopedia.com—the saving grace of Wall Street interns and corporate executives alike—

compound interest “is thought to have originated in 17th century Italy…as ‘interest on interest,’ and will make a sum grow at a faster rate than simple interest…because compound interest also takes into consideration accumulated interest of previous periods, the interest amount is not the same for all three years (as it would be with simple interest).”[19]

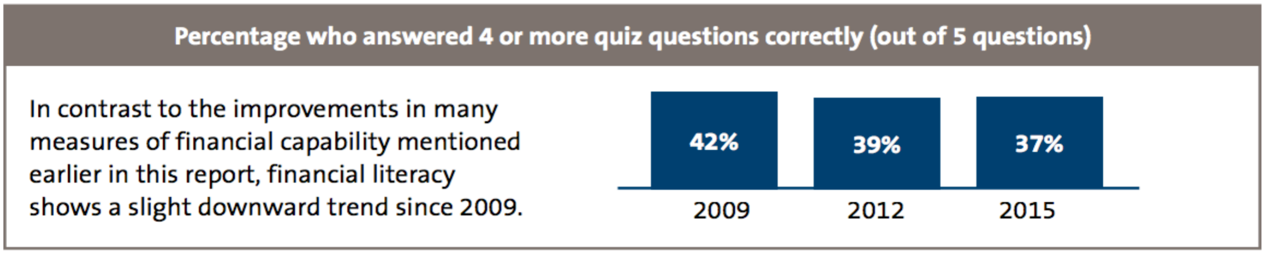
<u>Numeracy</u>—Numeracy describes ones’ ability to understand and deal comfortably with fundamental notions of number and chance.[20] Just as a population can be considered illiterate because it lacks the ability to understand and deal comfortably with letters and words, the same can be said with respect to numbers and calculations. Consider the following two examples designed to test elementary-level numeracy skills:

> “Despite a good deal of opinion to the contrary, an item whose price has been increased by 50 percent and then reduced by 50 percent has had a net reduction in price of 25 percent and. A dress whose price has been ‘slashed’ 40 percent and then another 40 percent has been reduced in price by 64 percent, not 80 percent.”[21]

The following chart illustrates how the four basic concepts, tested by the SP500 Global Financial Literacy survey and concisely defined above, are really umbrella terms representing a more comprehensive list of key sub-concepts and specific terms necessarily involved in the managing of American personal finances:

Diversification	Inflation	Numeracy	Interest
Systemic Risks • Purchasing power risk • Reinvestment risk • Interest rate risk • Market risk (Beta) • Exchange rate risk Un-systemic Risks: • Business industry risk • Financial (debt) risk • Default risk • Geographic risk • Liquidity risk • Tax risk	Consumer Price Index (CPI) • Includes food, clothing, housing, property taxes, fuels, transport, medical care, college tuition and other commodities Purchasing Price Index (PPI) • Measures wholesale price changes for goods, services, construction sold to final demand The Phillips Curve • Relationship between unemployment and inflation	Compounded Returns • Annualized, assumes return on reinvested amount Time Value of Money • Given that money can earn interest, a dollar is worth more the sooner it is received Data Interpretation • Graphs • Charts • Diagrams	Nominal Rate • Absolute measure of interest rate in terms of dollars; stated rate without considering inflation Real Rate • Nominal rate adjusted for inflation rate Discount Rate • Interest rate charged by Federal Reserve on a loan to a member bank; impacts the Prime Rate Prime Rate • Interest rate commercial banks can offer credit-worthy customers

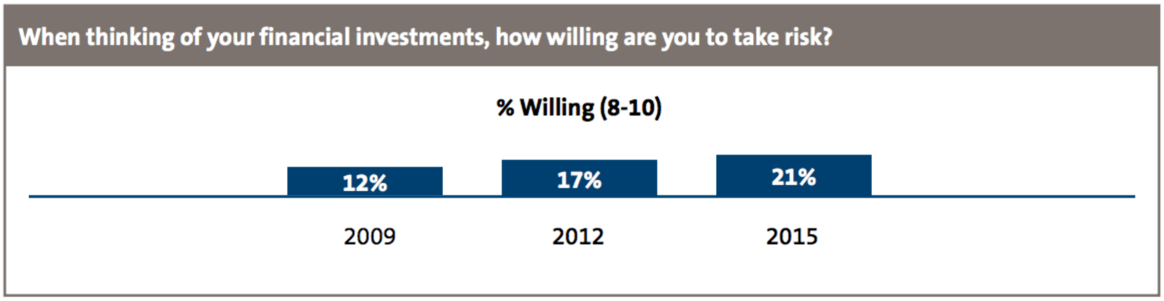
The SP500 Global Financial Literacy survey is not the only study that attempted to gauge the level of financial literacy among Americans. The "Financial Capability in the United States in 2016" report published by the Financial Industry Regulatory Agency (FINRA) also offers key insights further explaining the current state of financial literacy and capability within the US. FINRA's 2016 report found the percentage of respondents able to correctly answer at least four of five questions on their financial literacy quiz has decreased since 2009. Yet at the same time, the report noted how "Americans' perceptions of their own financial knowledge have become more positive over the same time period."[22] Clearly a gap between self-reported knowledge and real world behavior exists.



	Correct	Incorrect	Don't know
Interest rate question	75%	13%	12%
Inflation question	59%	20%	20%
Bond price question	28%	33%	38%
Mortgage question	75%	8%	16%
Risk question	46%	10%	44%

Figure 3: "Financial Capability in the US" (Source: 2016 FINRA Financial Capability Survey)

Data from the Federal Reserve System's 2015 Survey of Household Economics and Decision-making reveals that 54% of Americans have no form of emergency savings, and 46% of respondents would be unable to cover emergency expenses of $400 without selling something or borrowing funds.[23] Despite the fact that planning for retirement has been shown to be a strong indicator of retirement wealth, 56% of those polled by FINRA have made no attempted to estimate their retirement needs, and less than 30% held investments in stocks, bonds, mutual funds, or other securities (excluding retirement accounts). [24] This figure also continues a downward trend, with 34% of those polled holding investments in 2009 but 32% in 2012.[25]



	Total	Income			Education		
		<$25K	$25-75K	$75K+	HS or less	Some college	College or more
Have non-retirement investments	30%	10%	27%	53%	18%	27%	48%

Figure 4: Perceived Levels of Risk and Retirement Investments (Source: 2016 FINRA Financial Capability Survey)

Key findings from the 2016 National Foundation for Credit Counseling's (NFCC) Consumer Financial Literacy Survey confirm those of FINRA's Financial Capability report. The NFCC found that 45% of US adults gave themselves a letter grade of C, D, or F in terms of their knowledge of personal finance, and 75% of those polled agree and they could greatly benefit from the answers to everyday financial questions. The report also revealed that 26% of those polled have no form of retirement savings, 60% do not budget, and 22% admitted to regularly not paying bills on time.[26]

Perhaps most surprising of all figures presented by the NFCC's is the following: Over 91% of respondents said they are "very or somewhat confident that the last time they made a big financial decision (such as picking a car, or refinancing their mortgage), they made the right choice."[27] However, *feeling* confident in a financial decision is not the same as actually *making* the right decision.

Starting a National Conversation

On November 22, 2003, the Fair and Accurate Credit Transactions Act, also known as the FACT Act (FACTA), was signed into law by former President George W. Bush as an amendment to the Fair Credit Report Act, established 30 years prior during the Nixon Administration. Due to FACTA, consumers can legally request and obtain free credit reports once every twelve months from three consumer credit reporting companies—Equifax, Experian, and TransUnion—via the website, "AnnualCreditReport.com."

But FACTA did more than just create the free credit report site. The legislation contains seven major titles: Identity Theft Prevention and Credit History Restoration, Improvements in Use of and Consumer Access to Credit Information, Enhancing the Accuracy of Consumer Report Information, Limiting the Use and Sharing of Medical Information in the Financial System, Financial Literacy and Education Improvement, Protecting Employee Misconduct Investigations, and Relation to State Laws.[28]

It is Title V of FACTA, which focuses on "Financial Literacy and Education Improvement," that makes the Act relevant to the discussion of American financially literacy today. Title V formally established the "Financial Literacy and Education Commission." According to US federal law, the Commission "shall serve to improve the financial literacy and education of persons in the United States through development of a national strategy to promote financial literacy and education." The Commission is to be composed of:

A) The Secretary of the US Treasury, B) the respective head of each banking agency (defined in section 3 of the Federal Deposit Insurance Act), the National Credit Union Administration, the Securities and Exchange Commission, each of the Departments of Education, Agriculture, Defense, Health and Human Services, Housing and Urban Development, Labor, Veterans Affairs, the Federal Trade Commission, the General Services Administration, the Small Businesses Administration, the Social Security Administration, the Commodity Futures Trading Commission, and the Office of Personnel Management, and C) up to five Presidential appointees from other various federal agencies.

The Commission is required to call at least one publically accessible meeting every four months. In general, The Commission is tasked with taking actions to streamline, improve, or augment financial literacy and education programs, grants, and published materials of various federal agencies. The Commission is supposed to emphasize the importance of personal income and household money management through eleven "Areas of Emphasis:"

SEC. 514. DUTIES OF THE COMMISSION.

(a) DUTIES.—

(1) IN GENERAL.—The Commission, through the authority of the members referred to in section 513(c), shall take such actions as it deems necessary to streamline, improve, or augment the financial literacy and education programs, grants, and materials of the Federal Government, including curricula for all Americans.

(2) AREAS OF EMPHASIS.—To improve financial literacy and education, the Commission shall emphasize, among other elements, basic personal income and household money management and planning skills, including how to—

(A) create household budgets, initiate savings plans, and make strategic investment decisions for education, retirement, home ownership, wealth building, or other savings goals;

(B) manage spending, credit, and debt, including credit card debt, effectively;

(C) increase awareness of the availability and significance of credit reports and credit scores in obtaining credit, the importance of their accuracy (and how to correct inaccuracies), their effect on credit terms, and the effect common financial decisions may have on credit scores;

(D) ascertain fair and favorable credit terms;

(E) avoid abusive, predatory, or deceptive credit offers and financial products;

(F) understand, evaluate, and compare financial products, services, and opportunities;

(G) understand resources that ought to be easily accessible and affordable, and that inform and educate investors as to their rights and avenues of recourse when an investor believes his or her rights have been violated by unprofessional conduct of market intermediaries;

(H) increase awareness of the particular financial needs and financial transactions (such as the sending of remittances) of consumers who are targeted in multilingual financial literacy and education programs and improve the development and distribution of multilingual financial literacy and education materials;

(I) promote bringing individuals who lack basic banking services into the financial mainstream by opening and maintaining an account with a financial institution; and

(J) improve financial literacy and education through all other related skills, including personal finance and related economic education, with the primary goal of programs not simply to improve knowledge, but rather to improve consumers' financial choices and outcomes.

Figure 5: FACT Act "Areas of Emphasis" (Source: US S.357 FACT Act, 2015)

FACTA initiated a national conversation about financial literacy that had been previously unacknowledged, and at best, unorganized. FACTA brought the concept of financial literacy to the desk of the President years before the Financial Crisis. Yes, both Title V of FACTA and The Commission it established took steps to clarify and outline specific "Areas of Emphasis" involved in personal financial management, but the broad legislation and decentralized strategy also left crucial, albeit complex, questions unanswered: What specific questions, behaviors, or skills distinguish a financially literate consumer from an illiterate one? In other words, just what should a financially literate consumer know? When should individuals learn about these specific skills and behaviors? From whom should they learn and through what methods? Despite the early efforts to improve financial literacy, little actual and measurable change occurred, largely because no sense of urgency or obligation was yet widely felt. The Financial Crisis challenged this apathy.

On January 22, 2008—two months before JP Morgan officially took control of Bear Stearns and eight months before the Troubled Asset Relief Program (TARP) passed—the issue of financial literacy once again graced former President George W. Bush's desk in the Oval Office when he issued Executive Order 13455, "Establishing the President's Advisory Council on Financial Literacy." [29] In Section I of the Order, President Bush cited the FACT Act and argued "To help keep America competitive and assist the American people in understanding and addressing financial matters, it is the policy of the Federal Government to encourage financial literacy among the American people." Unlike The Commission established by FACTA, President Bush's Advisory Council was to be comprised of non-Federal Government employees and represent a diverse set of stakeholders, industries, and organizations interested in the advancing the state of American financial literacy.

The Advisory Council was asked to pick up where FACTA had started and advise the President on how to best improve the financial education efforts for youth in schools and for adults in the workplace, how to promote effective access to financial services (especially for those without access to such services), how to establish effective measures of national financial literacy, and how to better coordinate public and private sector financial literacy programs. A year later, the Advisory Council published its first annual report summarizing key findings and policy recommendations for the President and Secretary of the Treasury, Henry Paulson.

In the Annual Report's opening letter, the Council's Chairman, Charles R. Schwab, argued that prior to the Crisis "far too many Americans entered into home and other loan agreements that they did not understand and ultimately could not afford…[and] more broadly, the lack of basic skills such as how to create and maintain a budget, understand credit, or save for the future are preventing millions of Americans from taking advantage of our vibrant economic system."[30] The view that consumers themselves, either in part or more substantially, are to blame for the 2008 Financial Crisis is revisited in greater depth in the third chapter of this thesis.

The Advisory Council was split into five separate committees—the Youth Committee, the Workplace Committee, the Outreach Committee, the Research Committee, and the Committee on the Underserved—and published a list of 12 notable actions taken to address the lack of financial literacy in the US during its first year of existence. One key action item was launching the first-ever National Financial Literacy Challenge, an exam administered by the US Treasury Department on personal finance issues and taken by over 46,000 American high school students during May of 2008. Another notable Council activity was the endorsement of the "Statement of Principles and Recommendations for the Future of Subprime Lending." The policy statement aimed to address three foundational principles related to Subprime Lending practices: 1) That financial literacy must be at the foundation of all subprime lending, 2) a key goal of all subprime lending must be to move subprime borrowers to prime borrowers, and 3) that lending products should have straightforward disclosures. Additionally, during the 2008 calendar year, the President's Advisory Council hosted or participated in over a dozen town hall meetings, roundtable, conferences, and "listening sessions" where one or more Council member met with a local community, business, education, or non-profit leader to discuss enhancing financial literacy in local communities.

The President's Advisory Council for Financial Literacy ultimately offered the President and Secretary five broad directives and fifteen additional sub-recommendations. The first of these general directives was to "Expand and improve financial education for student from kindergarten through post-secondary education." In order to accomplish this, the Council recommended the following:

1. Mandating financial education for students in grades K-12.
2. Institutionalizing and expanding the "National Financial Literacy Challenge" to gain broader participation and comparative assessment data.
3. Implementing the "Post-Secondary Financial Education Honor Roll Program," approved by the full Council in 2008, to encourage best practices in college and universities.
4. Requiring college students to take a more comprehensive course in financial literacy, or perhaps pass a competency test to in addition to (or in replacement of) the existing "entrance and exit counseling requirements" required for gaining Federally funded/guaranteed student loans.
5. Promoting the availability of financial education resources for parents, caregivers, and teachers to use with pre-school and early elementary children.

The second broad recommendation offered by the Council was to "Support the increasingly important role of employers as providers and conduits of financial education to their employees." The Council outlined three supporting recommendations to assist in accomplishing this task:

1. Imploring Congress to explore one or more tax incentives to encourage employer participation in providing financial education at work.
2. Urging the US Treasury Department to implement the Workplace Financial Education Higher Education Honor Roll Program
3. Creating an Internet-based resource center for the public and, more specifically, for human resources (HR) representatives. The Council recommended establishing such a center on the pre-existing government site, www.mymoney.gov.

Next, the Council recommended that the President and Secretary "Increase access to financial services for the millions of unbanked and underserved Americans" via the following two steps:

1. Asking Congress to require financial institutions to provide every American with equal access to an electronic, debit card-accessible depository account; this account should be protected by the Federal Deposit Insurance Corporation (FDIC) or the National Credit Union Administration.
2. Providing Federal funding for any non-profit organizations working in community-based financial literacy programs and for state and local governments demonstrating leadership in financial education.

The fourth recommendation presented by the Council was to "Identify and promote a standardized set of skills and behaviors that a financial education program should teach an individual." While the Council failed to specifically outline any of these skills and behaviors, it did encourage the President and Secretary to first agree on a universal definition of the term "financial literacy" by:

1. Accepting the Council's definition of financial literacy as "the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being." Note that with this recommendation (the eleventh of the fifteen total) the Council goes further to explain that financial *education*, therefore, is "the process by which people improve their understanding of financial products, services, and concepts, so they are empowered to make informed choices, avoid pitfalls, know where to go for help and take other actions to improve their present and long-term financial well-being."
2. Identifying and standardizing the specific skills a person should have upon the completion of a comprehensive financial literacy program and explore the creation of a certification program for those who meet the criteria.

The final, but arguably the most general, of all suggestions made by the Council was to "Promote more awareness among Americans of the state of financial literacy generally and of their own financial literacy, and dedicate more resources toward educating Americans how to improve on the results." The Council believed this should be accomplished in the following three ways:

1. Encouraging colleges, universities, and other research entities to explore the state of financial literacy and the most effective measure to increase financial literacy in the United States.
2. Creating and distributing a self-administered "National Financial Check-Up" via nonprofit organization networks to allow Americans to assess their own knowledge and provide links to trustworthy sources of information to fill knowledge gaps.

3. Appropriating additional Congressional funds to the Treasury Department to coordinate active and ongoing media and marketing campaigns in order to promote widespread knowledge of general financial education concepts. These efforts should include both direct and multi-media campaign outreach.

As President of the United States, George W. Bush signed a total of 291 Executive Orders.[31] Unlike a nearly identically coded Order—Executive Order 13435 over controversial stem cell research practices—Executive Order 13455 to expand financial literacy efforts will likely never make it into history books.[32] In fact, outside of those who served on The Advisory Council, few even know the Order exists. But despite its lack of notoriety, Executive Order 13455 was instrumental in building on momentum established with the FACT Act four years prior.

First of all, the Order formally solidified financial literacy as a national and urgent concern. In the words of the Council's chairman, Charles R. Schwab, "Financial illiteracy is not an issue unique to any one population. It affects everyone—men and women, young and old, across all racial and socio-economic lines…the economic future of the United States depends on it." By formally recognizing the state of American financial illiteracy as a contributing cause, or at the very least exacerbating factor, of the 2008 Crisis, the Executive Order and subsequent Council recommendations made the consequences of financial illiteracy both tangible and potentially addressable.

Second, the Order forced unprecedented levels of collaboration and dialogue to occur not just between various branches and departments of the Federal government, but also between the private sector and consumers themselves in order to collaborate on and brainstorm ways to improve the future of American financial literacy. Ultimately, President Bush appointed 19 members to serve on the President's Advisory Council. The following list highlights a few of these members to prove how widespread and diverse this collaboration went:[33]

Charles R. Schwab—*Chairman and Founder of The Charles Schwab Corporation*
Ted Beck—*President and CEO of National Endowment for Financial Education*
Vice Admiral Cutler Dawson—*President and CEO of Navy Federal Credit Union*
Dr. Robert Duvall—*President and CEO of National Council on Economic Education (NCEE)*
Reverend Dr. Robert Lee—*Chairman and CEO of Fresh Ministries*
Laura Levine—*Executive Director of Jump$tart Coalition for Personal Finance*
David Mancl—*Director of the Office of Financial Literacy in the Wisconsin Department of Financial Institutions*
Mary Schapiro—*CEO of the Financial Industry Regulation Authority (FINRA)*

While the Executive Order and the accompanying recommendations put forth by the Council continued the financial literacy conversation and provided congressional policymakers with a list of potential next-steps and tangible solutions—mandating personal finance courses or offering employer tax incentives for workplace education—few of these solutions were ever actually put into practice or incorporated into long-lasting policy. With Washington's focus shifting towards monetary policy debates, the future administration, widespread corporate and bank bailouts, and preventing the recession from deepening, financial literacy efforts began to lose hard-earned momentum. For a more concrete example of this lost momentum, consider The Advisory Council's fourth recommendation—that the US Treasury Department "identify and promote a standardized set of skills and behaviors that a financial education program should teach an individual;" ultimately, the standardization of necessary skills and behaviors was not accomplished by the US federal government or any of its various agencies. And with no formal action taken at the federal level, the task fell to a particular nonprofit organization: The Jump$tart Coalition for Personal Financial Literacy.

Establishing Educational Standards

Comprised of more than 150 corporate, academic, non-profit, and government organizations, the Jump$tart Coalition conducts research, provides resources, and publishes financial education standards for the American public.[34] The Coalition includes a network of 40 state-affiliate coalitions working, on a more localized level, to advance financial education. Most, but not all, of these state-affiliates operate under the Jump$tart name and utilize both community volunteers and additional assistance from the national Jump$tart organization's regional consultants. After serving as the Director of the NASDAQ Educational Foundation from 1999-2004, Laura Levine became the second executive director of the Jump$tart Coalition. Following the signing of Executive Order 13455, Levine was appointed to President Bush's Advisory Council on Financial Literacy.[35]

In 2007, the Jump$tart Coalition—"committed to advancing financial literacy among pre-school through college-age youth"—published the first comprehensive sets of financial education standards of its kind. The proposed national standards argued for the introduction of finance curriculum in early elementary school and the gradual building upon foundational knowledge throughout the middle school years in order to produce high school graduates who are "competent, confident managers of their own money."[36] Since 2007, Jump$tart has updated these standards four times, with the most recent version published in 2015.

This 52 page-long, K-12 guide recognizes financial literacy as a continuously evolving concept dependent upon ones life stage and personal values, goals, or circumstances. The coalition acknowledges that advancing financial education is inherently complex given how multi-disciplinary the subject is—drawing from economics, mathematics, business, and consumer science topics—and that financial literacy is more than just knowledge of facts or figures. Effective financial literacy develops financially capable adults with the ability to utilize information, seek additional resources, and make sound financial decisions. [37] Jump$tart also believes that financial literacy needs are often best met when states, territories, and local jurisdictions establish their own standards and sees its National Standards as less of a requirement and more of a model to support consistency.

Despite the acknowledged complexities and sensitivities associated with financial education, Jump$tart's 2015 National Standards Guide details six distinct curriculum categories: Saving and Spending, Credit and Debt, Employment and Income, Investing, Risk and Insurance, and Financial Decision Making:

Financial Literacy Educational Category	**Overall Competency Statement**	**Specific Standards**	**Sample Benchmark Activities**
Saving and Spending	*"Implement a diversified strategy that is compatible with personal financial goals."*	1. Develop a plan for spending and saving. 2. Develop a system for keeping and using financial records. 3. Describe how to use different payment methods. 4. Apply consumer skills to spending and saving decisions.	• Devise a system to retain evidence of tax-deductible expenditures. • Compare the features and costs of online and mobile bill payment services offered at various institutions. • Write a check. • Research average cost of four-year college education, a wedding, and a new versus used car.
Credit and Debt	*"Develop strategies to control and manage credit and debt."*	1. Analyze the costs and benefits of various types of credit. 2. Summarize a borrower's rights and responsibilities related to credit reports. 3. Apply strategies to avoid or correct debt management problems. 4. Summarize major consumer credit laws.	• Compare the cost of borrowing $1,000 through different consumer credit options. • Differentiate between adjustable and fixed-rate mortgages. • Explain how business owners use debt as leverage. • Investigate how a negative credit score can affect a consumer's financial options. • Give examples of how the Consumer Financial Protection Bureau (CFPB) protects borrowers and provides information about credit.
Employment and Income	*"Use a career plan to develop personal income potential."*	1. Explore job and career options. 2. Compare sources of personal income and compensation.	• Discuss how non-income factors like child-care, cost of living, and work conditions influence job choice.

		3. Analyze factors that affect net income (IRS form familiarity).	• Develop a resume and cover letter for a specific job of interest. • Differentiate between required employer contributions and additional benefits an employer may offer. • Explain the effect of inflation on income and purchasing power. • Complete IRS forms (W-4, 1040EZ, Form 1040).
Investing	*"Implement a diversified investment strategy that is compatible with personal financial goals."*	1. Explain how investing may build wealth and help meet financial goals. 2. Evaluate investment alternatives. 3. Demonstrate how to buy and sell investments. 4. Investigate how agencies protect investors and regulate financial markets and products.	• Illustrate how the concept of the time value of money applies to retirement planning. • Compare total fees for buying, owning and selling various types of stocks, bonds, mutual funds, and exchange-traded funds (ETFs). • Evaluate how economic conditions and business factors affect the market value of a stock. • Distinguish between the information, assistance, and protection individual investors can receive from: The Securities and Exchange Commission (SEC), Financial Industry Regulatory Agency (FINRA), Consumer Protection Financial Bureau (CFPB), and State Securities Administrators.
Risk Management and Insurance	*"Apply appropriate and cost-effective risk management strategies."*	1. Identify common types of risks and basic risk management methods. 2. Justify reasons to use property and liability insurance. 3. Justify reasons to use health, disability, long-term care and life insurance.	• Note how individual actions, circumstances, and lifestyle choices can impact insurance coverage and costs. • Investigate consequences of insurance fraud. • Determine the legal minimum amounts of auto insurance coverage required in one's state. • Investigate requirements for health insurance coverage.
Financial Decision Making	*"Apply reliable information and systematic decision making to personal financial decisions."*	1. Recognize the responsibilities associated with personal financial decisions. 2. Use reliable sources when making financial decisions. 3. Summarize major consumer protection laws. 4. Make criterion-based financial decisions by systematically considering alternatives and consequences.	• Develop a definition of wealth based on personal values, priorities and goals. • Research where to find credible sources of up-to-date information about consumer rights and responsibilities. • Demonstrate how to negotiate employment conditions or compensation. • Develop a contingency to deal with events, such as a car

		5. Apply communication strategies when discussing financial issues. 6. Analyze the requirements of contractual obligations. 7. Control personal information. 8. Use a personal financial plan.	breakdown or phone loss that might affect personal finances on short notice.

As shown in the table's last column, "benchmark activities" accompany each standard proposed by Jump$tart. And while the activities shown in the table reflect those intended for students at a 12th Grade level, the Coalition also publishes simpler recommendations directed toward students at Kindergarten, 4th Grade, and 8th Grade levels. These activities are intended to offer policy makers and educators practical, not just theoretical, ways to improve financial literacy through situational exercises; because it is one thing to agree that teaching students about "spending and saving" is important, but it is another thing entirely to take proactive steps which offer meaningful ways to accomplish this goal—like writing a sample check, comparing new versus used car prices, evaluating the costs of various credit sources, and examining the features of online banking platforms.

Jump$tart does more than just publish standards and benchmark activities. The Jump$tart websites offers a research clearinghouse, an automatic budget and career suggestion tool, called "Reality Check," and policy updates and announcements that impact the financial literacy of American youth. The clearinghouse serves as a premier online library of resources with sample lesson plans, interactive games, aggregated learning modules for professionals, policy makers, teachers, and parents. Jump$tart was also the original promoter of April as "Financial Literacy Month."[38] Each April, Jump$tart organizes a "Financial Literacy Day" on Capitol Hill to raise awareness for financial literacy efforts and has hosted an Annual Awards Dinner since 1999 to highlight individuals and organizations actively advancing these efforts. Previous winners of Jump$tart's' Annual Award include Richard Ketchum, the Chairman & CEO of FINRA, Maxine

Sweet, the VP of corporate relations for Experian/North America, and Annamaria Lusardi, Ph.D., the Academic Director of the Global Financial Literacy Excellence Center at George Washington University.

In 2009, Jump$tart received a grant from Experian, a global information and credit score provider, to host its annual Jump$tart National Educator Conference. The 2016 conference was held November 5-7 in Dallas, Texas, and was "generously underwritten by Wells Fargo and Experian," a fact the third chapter of this thesis proves both ironic and concerning. [39] Teachers of all subjects, skill levels, and of grade levels from Pre-K to twelve were invited to attend. The conference featured keynote speakers like behavioral economist, Sarah Newcomb of Morningstar, Dan Kadlec, an author for TIME and Money Magazine, and Adam Carroll, a popular TEDex speaker.

Conference attendees were each given a free copy of the 2015 Jump$tart Coalition Standards, awarded 15 professional development hours (PDH), and chose between three concurrent tracks: "Content/Curriculum," offering tools and techniques for in-class use, "Personal Development," improving educators' own level of financial literacy, and "Ask the Experts," diving deeper into more advanced financial topics with industry leading experts.

Attending the Jump$tart conference is just one example of how American adults, aspiring to become more financially literate either for their own benefit or for the sake of informing others, can access financial education. But attending a financial conference is far from the only way to reach this goal. The following chapter further explores various sources of financial information available to consumers and asks important questions regarding the fairness, effectiveness, and credibility of these numerous sources.

Chapter II: Who provides financial education?

"Before our children are old enough to drive or vote, they're offered credit cards. And yet by the time they have graduated high school or they may have learned something about the history of the gold standard, while they may understand how to solve quadratic equations, few have learned enough about the basics of debt, about compound interest, about the risks associated with investing and borrowing."

– Timothy Geithner, Former US Secretary of Treasury

Relying on Schools

As of 2015, less than one third of American adults had been offered financial education either in school, college, or their workplace. Of those offered formal education, less than one in every five adults actually participated.[40] According to the Champlain College Center for Financial Literacy, only 17 states require their high school students to enroll in a personal finance course prior to graduation.[41]

Champlain College publishes an annual "National Report Card on Adult Financial Literacy" which assigns each state a letter grade and conveys to interested individuals and relevant policymakers how well (or poorly) their individual state advances the financial literacy and capability of its citizens.[42] Champlain College outlines two distinct components required for effectively measuring financial literacy. First, specific skills and understandings need testing to determine whether individuals possess the appropriate knowledge and basic skills necessary to make informed financial decisions. The second, and arguably more difficult element to test is behavioral change. Knowing you *should* run a mile a day to reduce heart failure, obesity, and premature death is one thing. It is another matter entirely to translate this knowledge into action.[43]

To measure both the financial literacy skills and behaviors across the nation, Champlain College relies on 59 state-specific data points. The information analyzed comes from the following organizations: AARP Public Policy Institute, American Council of Life Insurers, Bankrate, Corporation for Enterprise Development, Experian, Federal Deposit Insurance Corporation (FDIC), Federal Reserve Bank of New York, Financial Industry Regulatory Agency (FINRA) Investor Education Foundation, the Institute for College Access and Success, Insurance Information Institute, National Association of Insurance Commissioners, The Pew Charitable Trusts, RealtyTrac, TransUnion, US Census Bureau, Urban Institute, and WalletHub.

The National Report Card's grading system is a relative grading system; therefore, if a state receives a good grade it "may only mean they are the best in a class of poor students." The best state is awarded a 100 (A+) per evaluation category and the worst a 55 (F). All other states are assigned a grade between the two using a linear curve grading method.[44] With that said, the report's authors make it clear that "every state in our nation has dramatic room for improvement on the items measured in this report…looking better than your peers should not be an excuse for maintaining things as they are today."

Despite the necessary imperfections of relative grading, the National Report Card offers informative insights. Each state's overall grade was based on the following evaluation sub-categories: Financial Knowledge, Total Credit, Saving and Spending, Retirement Readiness, and Protection and Insurance. As a benchmark, the United States' overall 2016 grade was 74.06 (C). The highest overall grade was Montana's 92.38 (A-).

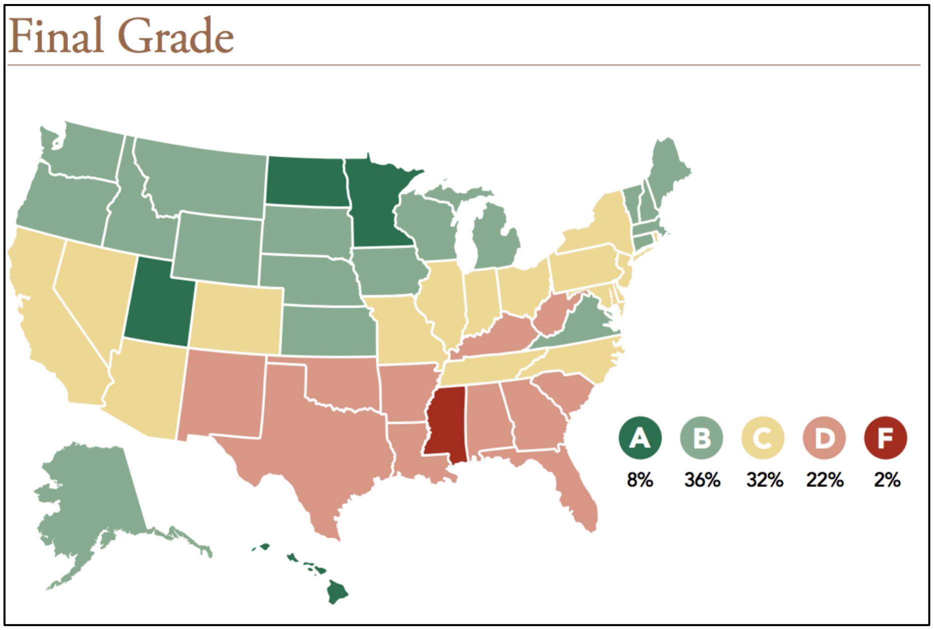


Figure 6: National Report Card on Adult Financial Literacy, Final Grade (Source: Champlain College)

The "Financial Knowledge" grade measured the personal finance knowledge levels of adults in each state. The grade was calculated by weighting the results of three surveys: The first was six-questions long and covered topics like investment diversification, bond pricing, basic interest, compound interest, mortgages and inflation. The second survey asked whether or not adults were offered financial literacy education by their school, college, or employer. This survey also asked participants whether they actually took advantage of the offered courses or resources. The third survey used to calculate the "Financial Knowledge" grade was created by Champlain Center for Financial Literacy itself and assessed the quality and accessibility of financial education in the state's public schools.

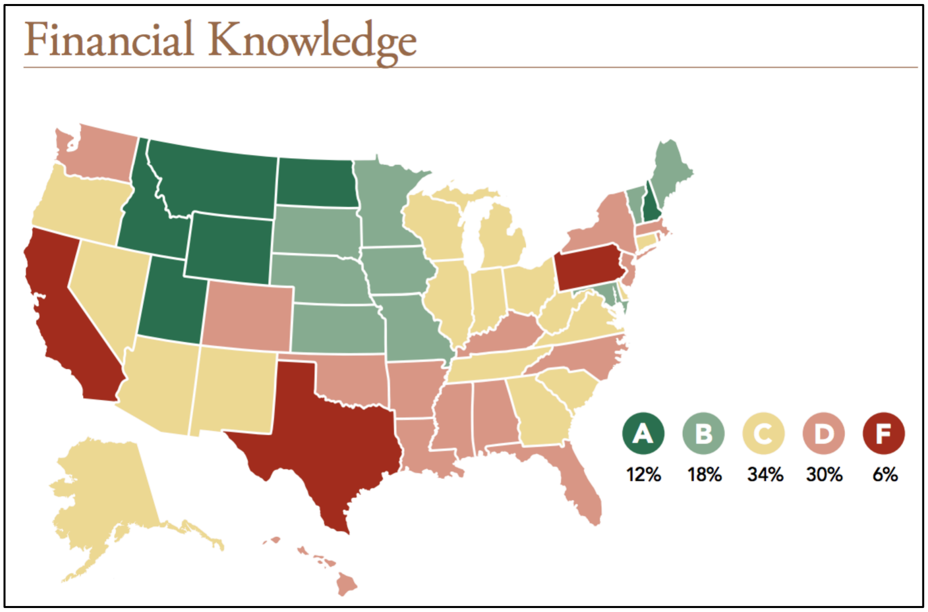


Figure 7: National Report Card on Adult Financial Literacy, "Financial Knowledge" (Source: Champlain College)

The states with the best and worst Financial Knowledge grades are as follows:

Top 10 States	Bottom 10 States
Utah	Massachusetts
Wyoming	Oklahoma
Montana	New York
Idaho	Florida
New Hampshire	Mississippi
North Dakota	Rhode Island
Vermont	Washington
Minnesota	Texas
Missouri	Pennsylvania
Maine	California

Figure 8: Top and Bottom 10 States According to Financial Knowledge Grades (Source: Champlain College)

Texas, Pennsylvania, and California were the three states receiving “F” grades for the Financial Knowledge component. Taking a closer look at Texas’ results produces an interesting paradox: The state received a “B” in the “levels of high school financial education” category, but an “F” in the “mean number of questions answered” category and an “F” in the “offered financial education and participated" category. Despite the fact that the state scored highly in the high school education category, the overall Financial Knowledge results were still extremely discouraging. Such a finding challenges the conclusion that high school instruction is an adequate solution to poor financial knowledge observed later in life, when individuals are forced to make large and impactful financial decisions like purchasing a home, selecting an insurance policy, or contributing to and managing their 401K portfolio.

The effectiveness of high school financial education has been studied more deeply by Carly Urban, an expert on state-mandated financial education at the Montana State University's Department of Economics.[45] In 2014, Urban's research was included in the Federal Reserve Board's "Finance and Economics Discussion Series (FEDS)."[46] According to the report, "despite the growth of financial and economic education provided in public schools, little is known about the effect of these programs on the credit behavior of young adults." The research relied upon a panel of credit report data and examined young adults in Georgia, Idaho, and Texas—three states where personal finance mandates were implemented in 2007. The credit scores and delinquency rates, both pre- and post-mandate implementation, of these young adults were then compared to border states without mandates. The bordering states (without financial education mandates) served as synthetic controls in Urban's research.

In 2004, an amendment to the Texas Education Code (Section 1A -28-28.0021) required economics courses taught to students in the 9th-12th grades to include personal financial literacy components.[47] The curriculum changes were to occur beginning with the 2006-2007 school year, with the option to delay this inclusion upon successful appeal to the Commission of Education. School districts would be allowed to include additional material in their economics courses, but were required to cover the following topics: 1) understanding interest and avoiding and eliminating credit card debt; 2) understanding the rights and responsibilities of renting or buying a home; 3) managing money to make the transition from renting a home to home ownership; 4) starting a small business; 5) being a prudent investor in the stock market and using other investment options, 6) beginning a savings program and planning for retirement; 7) bankruptcy; 8) the types of bank accounts available to consumers and the benefits of maintaining a bank account; 9) balancing a checkbook; 10) the types of loans available to consumers and becoming a low-risk borrower; 11) understanding insurance; and 12) charitable giving.

Urban's work corroborates previous research, yet is also unique in acknowledging several inherent difficulties associated with measuring financial education effectiveness. One of these challenges is the inevitable time lapse between policy implementation, the actual education, and the financial decisions themselves necessary for studying behavior changes. It is entirely possible that financial education reforms, like those implemented in Texas, occur simultaneously with broader school reforms or, perhaps, coincide with general shifts in economic conditions.

Also in contrast to previous studies of financial education, Urban found no two financial education programs are necessarily created equal—"some states offer intensive financial education programs that require multiple courses and performance testing. Other states may simply *recommend* schools offer some form of instruction on personal finance, but have no graduation or testing requirement on these topics." Measuring the impact of financial education also depends largely on the isolated variable used for comparison. In other words, comparing young adult levels and amounts of savings before/after exposure to a personal finance course may yield very different effectiveness conclusions than focusing on their credit scores before and after the course.[48] Urban's research indicates a direct cause and effect relationship between financial education mandates and improved financial outcomes is much more difficult, if not altogether impossible, to definitively prove.

But just because no measure is necessarily ideal or completely free from error does not mean testing and attempts to improve financial literacy levels should not occur. Imperfect proxies are not an excuse to abandon study and action altogether. Therefore, most efforts to gauge the effectiveness of financial education rely upon examining credit scores and delinquency rates.[49] Young adults establish credit histories by applying for credit cards, either on their own or with an authorized co-signor, and developing a detailed record of timely (or not so timely) payments.

Ultimately, Urban's work finds that "lower levels of measured financial literacy are associated with lower rates of planning for retirement, lower rates of asset accumulation, lower participation in the stock market, higher rates of using alternative financial services, and higher levels of debt." Urban's research identifies "young people who are in school after the implementation of a financial education requirement have higher relative credit scores and lower relative delinquency rates than those in control states." The results become more significant as time passes. Three years after implementing financial education requirements, larger increases in credit scores and reductions in delinquency rates among young adults were observed. Understanding, even at a basic level, the different types of available credit, the costs associated with these sources of funds, and the necessity of budgeting and saving allows students to gain financial knowledge earlier than they otherwise would; "before they have opportunities to run into credit management problems."

The fact that Texas received a failing grade from the Champlain College report card, but at the same time gained positive attention and results from Carly Urban's work, is not, as it might initially seem, a serious contradiction. Champlain College's report focused on existing levels of *adult* knowledge and financial behaviors, not necessarily on those of younger generations. Unlike Urban's work, Champlain's study did not account for issues like variable isolation and the lapse of time between implementing education standards and measuring their impact. Continuing to monitor the National Report Card scores in states like Texas, Georgia, and Idaho as their respective young adult populations mature into fully participating members of the national economy, and face more serious financial decisions as a result of doing so, will serve a truer test of the life-long, lasting impact of mandated financial education efforts.

Relying on Employers

For those who did not receive early exposure to financial concepts and skills in school, employer-provided education can have a large impact.[50] The issue of corporate responsibility and employer education is by means without controversy and stigmatization, but mounting evidence suggests that when employers provide more financial education programs, workers experience less financial distress, report having greater workplace satisfaction, and increase their participation in 401(k) retirement savings plans. Additionally, firms that offer mortgage and one-on-one counseling for personal finance have significantly lower debt and lower delinquency rates.[51]

The most comprehensive research on financial education in US workplaces is conducted by the International Foundation of Employee Benefit Plans—a 33,000 member-strong association serving the employee benefits and compensation industry since the passage of the Labor-Management Relations Act of 1947 (Taft-Hartley Act). The International Foundation of Employee Benefits sponsors the Certified Employee Benefits Specialists (CEBS) program along with the Wharton School of Business and Dalhousie University in Canada.[52]

The purpose of the International Foundation's 2016 report on "Financial Education for Today's Workforce," was to examine the "various types of retirement and financial education offerings U.S. and Canadian organizations provide to their employees and participants." The report is based on 406 completed responses and is broken down by sector to analyze differences between corporate employers (CE), public employers (PE), and multiemployer (ME) funds. Note that a multiemployer is an employee benefit plan maintained under one or more collective bargaining agreements (CBAs) and is contributed to by multiple employers.

Overall, the report found that 47% of the polled organizations rated their employees as "only a little bit or not at all financially savvy," and 34% say the "average active participant in their organization at normal retirement age is only a little bit or not at all prepared for retirement." Out of the same respondent sample, only 14% employers currently set aside funds in their annual budget for financial education. And of the organizations that do currently offer their employees financial education—either in the form of free consultation services, voluntary classes or workshops, or web-based resources—one third of them only recently began doing so within the past five years. However, Canadian organizations are more likely than those in the US to have provided financial education for at least ten years.

Organizational Perceptions Rating Scales

	CP (n = 157)	PE (n = 66)	ME (n = 183)	Total (n = 406)
How would you rate the overall stress level of your active participant/employee population?				
1—Very low	1.3%	0.0%	4.9%	2.7%
2—Somewhat low	8.3%	9.1%	16.9%	12.3%
3—Medium	52.2%	57.6%	48.6%	51.5%
4—Somewhat high	34.4%	28.8%	27.3%	30.3%
5—Very high	3.8%	4.5%	2.2%	3.2%
How financially savvy would you rate your active participant/employee population?				
1—Not at all savvy	2.5%	12.1%	10.9%	7.9%
2—A little bit savvy	33.1%	42.4%	43.2%	39.2%
3—Somewhat savvy	44.6%	42.4%	35.5%	40.1%
4—Very savvy	15.9%	3.0%	10.4%	11.3%
5—Extremely savvy	3.8%	0.0%	0.0%	1.5%
How prepared for retirement is the average active participant/employee in your organization when he or she reaches normal retirement age?				
1—Not at all prepared	2.5%	3.0%	4.4%	3.4%
2—A little bit prepared	30.6%	28.8%	31.1%	30.5%
3—Somewhat prepared	44.6%	51.5%	41.0%	44.1%
4—Very prepared	22.3%	15.2%	21.3%	20.7%
5—Extremely prepared	0.0%	1.5%	2.2%	1.2%

Figure 9: Organizational Perceptions (Source: International Foundation of Employee Benefits, 2016)

The report cites the biggest obstacle for improving financial literacy among employees as "a lack of interest among participants." Yet only one in ten organizations offer formal incentives for participating in financial education programs, and one in ten makes the education mandatory.[53] The most frequently cited incentives for attending financial education workshops or programs include iPad giveaways, free lunches or refreshments, and points tied to wellness programs, often associated with health care premium reductions and health savings accounts (HSA) contributions.[54]

As for what financial concepts are covered and by whom in employer-sponsored financial education programs, great disparity exists between firms:

Financial Education Providers*

	CP (n = 120)	PE (n = 51)	ME (n = 98)	Total (n = 269)
Plan recordkeeper/administrator	65.0%	43.1%	50.0%	55.4%
In-house staff	44.2%	66.7%	46.9%	49.4%
Investment manager/provider	37.5%	23.5%	48.0%	38.7%
Employee assistance plan (EAP)	35.8%	37.3%	20.4%	30.5%
Financial planners	22.5%	33.3%	25.5%	25.7%
Pension counselors	5.8%	35.3%	24.5%	18.2%
Community agency/organization	3.3%	15.7%	6.1%	6.7%
Actuaries	1.7%	3.9%	9.2%	4.8%
Banks	0.0%	3.9%	7.1%	3.3%
Other	0.8%	0.0%	0.0%	0.4%

*Respondents were asked to select all that apply.

Figure 10: Financial Education Providers (Source: International Foundation of Employee Benefits, 2016)

To get a better understanding of corporate America's outlook on financial literacy, consider the example set by McDonald's USA. As the nation's third largest employer, McDonald's puts over 500,000 individuals to work every day. And while almost anyone in the world has heard of the golden arches, many would be surprised to hear the fast-food giant is also considered an "Exemplary Employer" by the Personal Finance Employee Education Fund (PFEEF).[55] This designation is offered to firms that publically recognize the importance of financial education to ensure long-term success for both the employee and the employer.[56]

Through a partnership with Visa, Inc., McDonald's "Practical Money Skills" program is available to all employees and features money management tools, sample budgets, and instructional video/web resources. Since 2004, the fast-food company has offered a substantial retirement savings program. McDonald's 401(k) plans continue to match employee contributions. According to the PFEEF fund, "McDonald's corporate match is especially strong at lower levels of savings: employees who put just one percent of their salary in the plan get three dollars for every one dollar they invest…All told, workers who save five percent of their pay can see the total swell to 16 percent."

Relying on Lenders

In 2005, the National Bureau of Economic Research (NBER) published a working paper on the "Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets."[57] The paper, by Xavier Gabaix (Massachusetts Institute of Technology) and David Laibson (Harvard University), outlines two key findings: the first, and most intuitive, is that "when consumers make mistakes, firms will try to exploit those mistakes." The second assertion Gabaix and Laibson make is that "*de-biased consumers* end up with a subsidy from policies designed for *myopic customers*." It is this second point, when rephrased in the context of financial literacy, which proves most relevant for consumer financial management. Rephrasing the second argument to say that financially literate consumers end up with a subsidy from policies designed for financially illiterate consumers reveals just how banks and other financial institutions exploit the lack of financial literacy in the US to improve their bottom line. To explain further, the authors offer a simple analogy involving hotel rooms:

Consider a room at a Hilton hotel chain that costs $100 to supply. Next assume all consumers are initially myopic (i.e. they do not think about add-ons when planning a hotel stay) and end up paying an additional $20 for services like covered parking or Wi-Fi. Then, assume these add-ons are essentially cost-free for Hilton to provide to guests. So in a perfectly competitive market, Hilton would simply market their room for $80 and fail to mention the costly add-ons that increase revenues to $100 per stay. Alternatively, consider a theoretical hotel chain named Transparent which employs the opposite business strategy. Instead of selling their rooms for $80, Transparent prices at the full $100 but informs consumers in advance about the included “add-ons.” A firm like Transparent makes a point to inform their customers that their competitors, like Hilton, regularly shroud prices.

Somewhat surprisingly, Gabaix and Laibson argue, “this efficient pricing scheme [of the Transparent chain] might not attract any customers… [because] once consumers understand the high mark-up strategy of Hilton, consumer might prefer to stay at Hilton and simply substitute away from add-on consumption.” In other words, a sophisticated and financially literate hotel guest will opt for the shrouding strategy. This customer has the ability to foresee the add-on charges and avoid them altogether by, perhaps, finding public parking or using the Wi-Fi from the coffee shop next door. In fact, given the example’s parameters, neither firm is incentivized to educate or, at the very least, properly inform their customers. If Hilton were to do so, then consumers might forgo add-on purchases, and if Transparent does, then its customers will choose Hilton hotel rates instead. When this same analogy is applied to consumer finance issues and the banking industry, a financially literate customer will be treated very differently from a less sophisticated consumer, and their financial futures may differ drastically.

More recent research conducted by the World Bank and presented at the Consumer Financial Protection Bureau’s 2016 Research Conference confirms the work of Gabaix and Laibson.[58] The World Bank led a cross-cultural audit of financial institutions’ lending practices in Ghana, Mexico, and Peru in order to “understand the quality of financial information and products offered to low-income customers.” Researchers addressed the following two questions: “What is the quality of information provided by financial institutions to low-income prospective customers when choosing among financial products? Second, do financial institutions offer the product that best meets the customer needs, in particular as it relates to cost and intended usage?" While United States lending institutions and consumer protection laws were not the direct focus of the study, the World Bank's findings certainly provide relevant and informative lessons for their American counterparts.

The World Bank research team first trained local residents, then equipped them with scripts, and instructed them to approach financial institutions as if they intended to secure a loan or other savings product. The audit participants were also required to attend follow-up appointments if the bank deemed them necessary. In order to evaluate whether bank staff provided information to customers depending on their perceived level of financial literacy, the study varied "the financial sophistication (experience) of the auditor made salient by the language used and the level of engagement during the visits." To study whether lenders issued credit fairly and responsibly, the trained auditors requested loan amounts of either 20% or 70% of household annual income. To study the degree to which bank staff tailored specific products to clients, the "level of competition among experienced auditors" was varied; in other words, some participants mentioned receiving additional offers from other banks for the same product but at different terms during their visits. Finally, researchers randomly assigned each participant a list of banks to visit, a specific dress code, and a script from which to base their conversation off of at each appointment.

Auditors memorized their script and were not told the purpose or hypothesis of the overall study. The scripts themselves were varied three ways: First by financial literacy sophistication, second, by the degree of perceived competition, and third, by the required visit dress code. As for financial literacy, the auditors were either "experienced" or "neophytes," where experienced auditors were trained to mention they were actively shopping for competitive terms, demonstrated specific financial vocabulary knowledge, and asked for certain product information details if the staff did not voluntarily provide it. For example, when shopping for savings products, sophisticated auditors asked about interest rates, APY (annual percentage yield to measure total annual earnings), fees, and other costs of contract. Meanwhile, the inexperienced savings shoppers did not mention other offers and only asked about the stated interest rate. When shopping for credit products, the experienced auditors demanded information on interest rates, APR (annual percentage rate to measure total annual cost), fees and other costs of the contract. Unsophisticated credit shoppers in Mexico did not ask any additional questions, and those in Peru and Ghana asked simply for the interest rate. Again, "the reason for this treatment was to assess whether the staff calibrated the amount of information provided voluntarily to the perceived understanding of the customer."

In discussing the results of the audit study, the World Bank offers a similar example to Gabaix and Laibson's "Hilton versus Transparent" case to further clarify the nature and consequences of obscure bank tactics detected in the audit study:

> Suppose a bank can offer a 2 percent deposit rate on a savings account so long as it can also charge a fee whenever the average monthly balance falls below a certain minimum, to break even. If the fee is not assessed, the institution can only offer a 1 percent deposit rate. Suppose that there are two types of customers, naïve and sophisticated. Naïve customers are not informed about the minimum balance fee (or do not ask about it when opening the account) and thus decide which account to open based on the highest deposit interest rate offered…In this setup, banks will market accounts with a 2 percent deposit rate, failing to disclose the minimum balance fee, to attract naïve customers…Sophisticated customers will also be attracted to the 2 percent deposit rate but will never pay the minimum balance fee as they will take action to avoid it.

There is a clear and, in many cases, financially measurable difference between being a *sophisticated* and financially literate consumer as opposed to an *unsophisticated* and financially illiterate consumer. In each of the studied countries, bankers "offered just enough information for the audit participants to apply for a loan and open savings accounts, but that very little *voluntary* information about the costs of the product [were] provided."[59] The auditors who were assigned "educated" scripts and instructed to ask specific questions if the staff failed to disclose the information ended up better informed. Furthermore, the study showed that audit participants were rarely presented with the cheapest option. In Mexico (the only nation from those sampled with legally mandated "basic" savings accounts), "auditors were offered the basic account in only 2 of the 54 visits in which they expressed a preference for a transaction account." Mexico's Law on Credit Institutions (2007) requires all deposit-taking institutions to offer a "basic account" free of opening, deposit, withdrawal, balance enquiry, or debit card fees; however, only 5% of the transaction accounts held by the Mexican public are mandated, basic accounts.

The opaque and unfair conduct of bankers detected in Mexico, Ghana, and Peru is neither an isolated issue nor unique to just developing nations' economies. Product steering practices, unjustifiable fees, hidden terms, false information, and manipulative marketing strategies are all issues which received significant attention following the 2008 Financial Crisis and continue to plague the United State's financial sector today.[60]

According to the Consumer Financial Protection Bureau (CFPB) the financial industry as a whole spends over $17 billion, or $54 per person per year, to market its products and services to the American public. At the same time, federal, state, and local governments combined with nonprofits and charitable organizations together spend close to $670 million, or $2 per person per year, on financial education.[61]

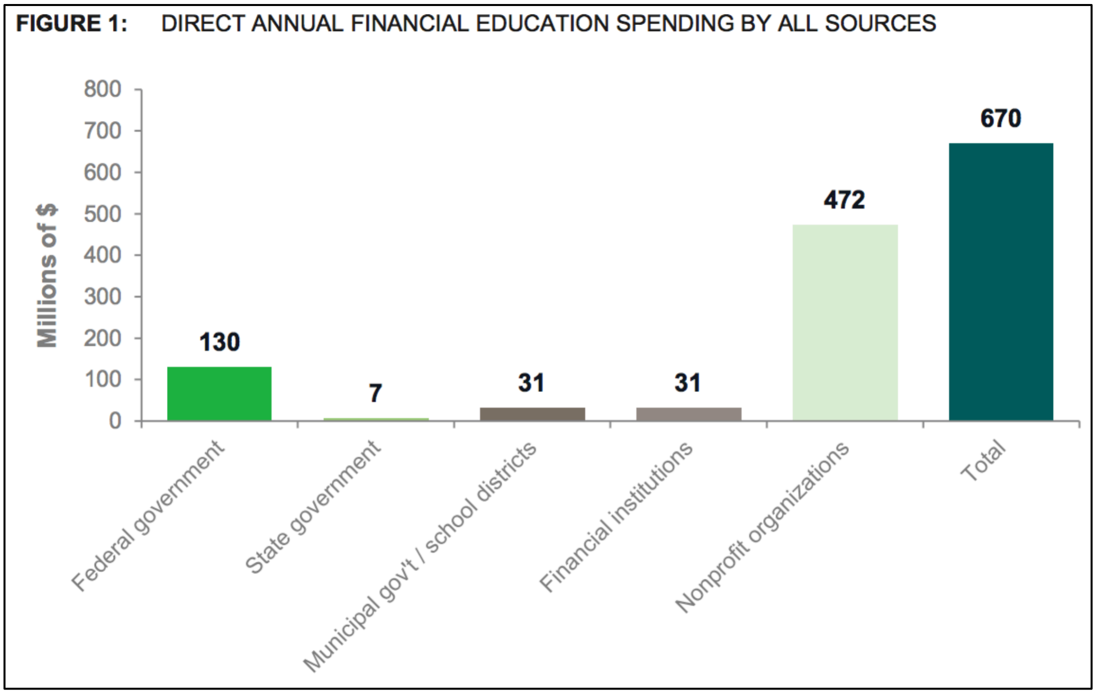


Figure 11: Direct Annual Financial Education Spending (Source: CFPB, 2013)

The figures are even more alarming given the fact that the $54 per person per year spent by financial institutions does not include funds spent to market specific retirement products, college loans programs or other investment vehicles.[62] As indicated by the CFPB's report, robust data sources that track specific dollar amounts spent on financial education do not presently exist, so the modeled figures presented should be compared more on an "order of magnitude" basis.[63] But despite how difficult estimating the amount spent on financial education may be, the CFPB found it "relatively straightforward to analyze spending on marketing, since the [financial] industry has established standard measurement techniques."

Two forms of marketing were analyzed in the report: awareness advertising and direct marketing. Of the $17 billion spent annually, awareness advertising accounts for roughly $5.5 billion and typically includes dollars spent on television, radio, and newspaper channels. Over half of the awareness advertising is directed at television ads for credit and loan related products.

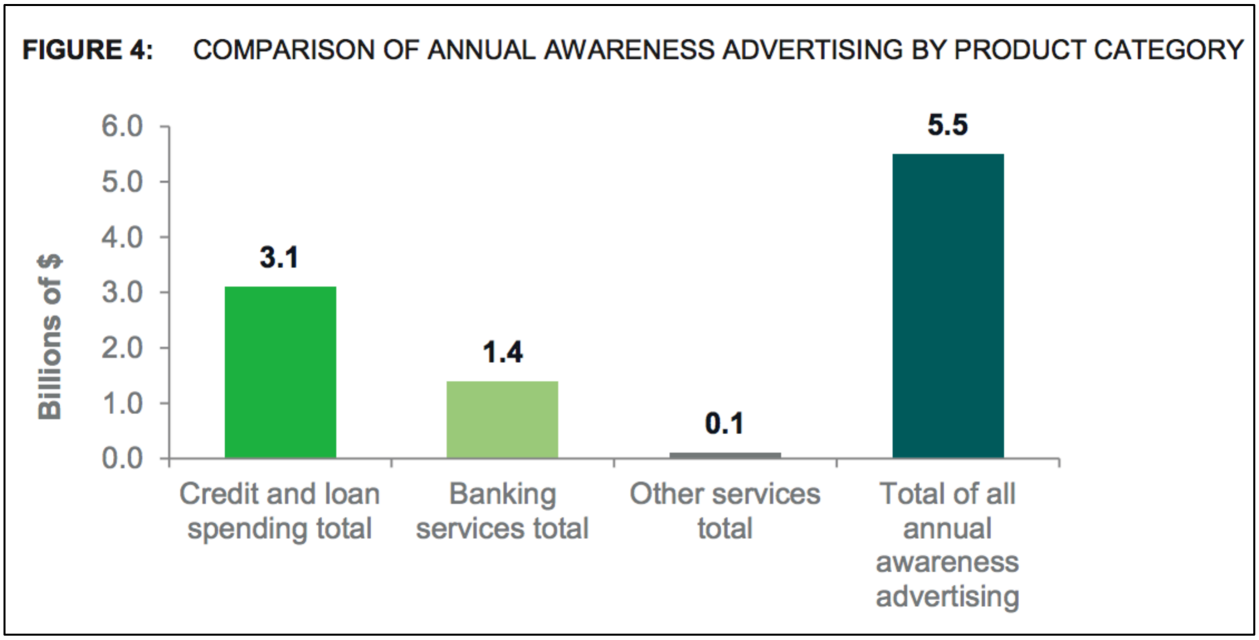


Figure 12: Comparison of Annual Awareness Advertising (Source: CFPB, 2013)

The remainder of marketing funds (12 billion) is spent on direct marketing and is often accomplished via the Internet, direct postal mail, and other methods encouraging consumers to make an immediate purchase decisions. Of this 12 billion, 44% is directed towards "internet display and search," 16% is television related, and 22% was direct mail. The fact that 25 times more is spent per year to influence consumer-purchasing behavior than to provide unbiased and educational information reveals a clear, and potentially dangerous, disparity.[64] The disparity also "raises the importance for providing high-quality sources of unbiased information…this includes school-based financial education to prepare youth to be able to navigate their financial lives as adults."[65]

Relying on the Media

For the American consumers who never took a high school finance course, somehow avoid never-ending financial institution marketing efforts, or lack access to employer education (perhaps because they lack a job in the first place/are unable to maintain long-term employment), there is always the media.

Today, almost every major news outlet has a designated "Personal Finance" column. Common headlines run something like—"Follow this easy guide to pay for your kid's college education," "How Couples Can Resolve Their Biggest Fight Over Money," or "The Trick to Investing in a 'Winner Takes All Economy.' "[66] Some articles, like many featured in the Wall Street Journal's "Your Money" section, are intended for already financially literate audiences; for people who do not have to look up the definition of risk, diversification, compounding interest; for those who know to be skeptical of market-beating returns (generally speaking, anything over 10%) and over-simplifications. Articles published by the New York Times, TIME, Wall Street Journal, CNBC, The Economist, Financial Times, Bloomberg, and hundreds more financially focused outlets are typically cross-checked, co-authored, and submitted to legal experts to avoid hefty corporate lawsuits before dissemination to the world wide web.

But the same cannot be said of all financial advice. It seems the problem of "fake news," also plagues the pursuit of financial literacy. On April 10, 2017, the US Securities and Exchange Commission (SEC) issued a press release warning "investors that seemingly independent commentary on investment research websites may in fact be part of paid stock promotion campaigns."[67] According to Stephanie Avakian, the Acting Director of the SEC's Division of Enforcement, "If a company pays someone to publish or publicize articles about its stock, it must be disclosed to the investing public." The SEC charged 27 separate parties with alleged stock promotion that appeared to be independent, unbiased analyses when it was, in fact, written for direct compensation.

The SEC encouraged those conducting financial research to "be aware that the article may not be objective and independent," and that "stock promotion schemes may be conducted through social media, investment newsletters, online advertisements, email, Internet chat rooms, direct mail, newspapers, magazines, television, and radio." Microcap stocks, often called penny or nanocap stocks, were noted as particularly susceptible due to general lack of public awareness and lower detection levels—think Jordan Belfort in the infamous "Wolf on Wall Street."[68]

One author of misleading content wrote under his own name but also used at least nine pseudonyms and claimed to be "an analyst and fund manager with almost 20 years of investment experience." The SEC filed fraud charges against three public companies and seven stock promotion/communication firms. So far, those charged have agreed to settlements ranging from $2,200 to $3 million, with the fine amounts determined by the frequency and severity of their publications.[69]

As the next chapter explores further, the SEC's decision to combat fake financial news is but one example of the increasingly important and present role regulatory agencies play in terms of financial literacy as well as financial markets in general. Because even a "financially literate" individual – who, theoretically speaking, took a personal finance course in high school, reads the Wall Street Journal with ease, could pass the SP500 Global Financial Literacy test or FINRA's Capability survey, and (even if it was for the free iPad) attends their employer-sponsored education program—could still be vulnerable to deceptive practices so frequently observed in the modern financial industry.

Chapter III: What is the relationship between financial literacy and regulation?

"There were many causes of the [financial] crisis. But the problems experienced by many Americans were exacerbated by the complexity of the financial marketplace and the decisions that consumers must make to manage their finances effectively."[70]

—Richard Corday, Director of the US Consumer Financial Protection Bureau (CFPB)

This chapter continues to stress the importance of financial literacy, but does so by exploring the relationship between financial literacy and regulation, as there are both situations and historical scandals to prove even the most financially literate individual's finances are never completely secure.

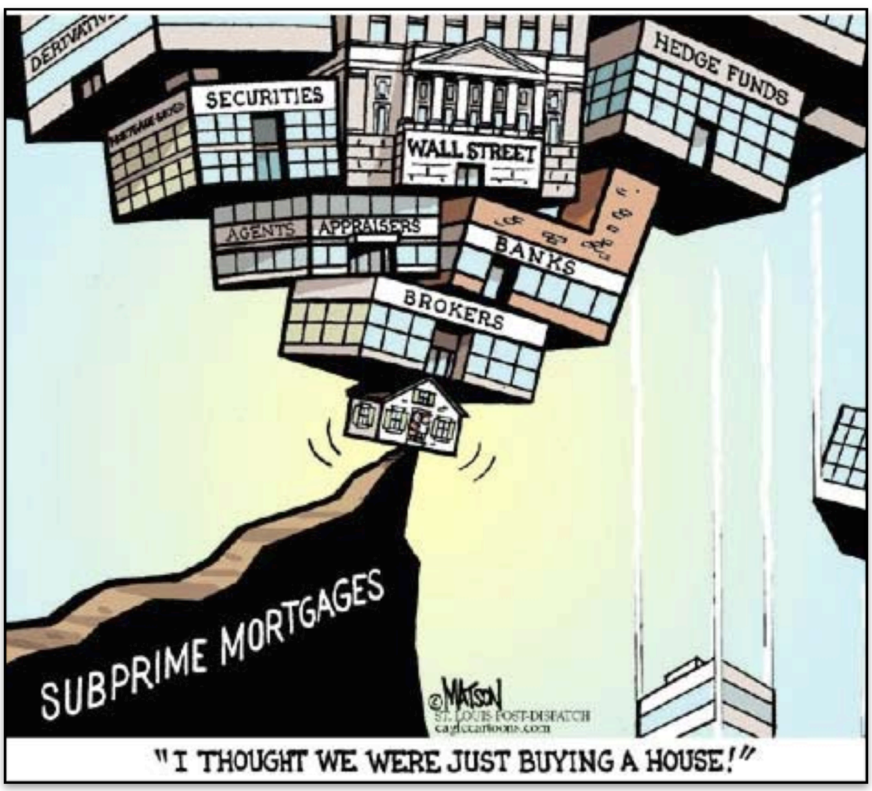


Figure 13: The Bullion Insider, 2008

Taking Notes from Hollywood

At the height of the Crisis, roughly seven trillion in value was lost in US real estate markets, eleven trillion in the stock market, and 3.4 trillion disappeared from retirement accounts.[71] To get a better sense of the lack of understanding and widespread financial illiteracy present before, during, and after the Crisis, consider producer Andrew McKay's onscreen adaptation of Michael Lewis' book, *The Big Short*.[72]

Both the book and film tell the stories of select hedge fund managers and traders who successfully bet against the giant housing bubble, and in turn, profited hugely from the economic chaos that became known as the Global Financial Crisis. But in order to make a box office hit about finance, McKay realized he needed to bridge "a giant gap between the professionals and the experts and average people," who feel "they're too dumb, or banking is boring."[73] So in an attempt to both grab the attention of and educate these "average people," McKay filmed actress Margot Robbie in a bubble bath while explaining the concept of mortgage-backed securities and featured singer Selena Gomez playing blackjack while explaining Collateralized Debt Obligations (CDO's).

By no means does McKay's film exhaustively or fairly explore all causes and effects of the Crisis. But it was not necessarily intended to do so. As McKay made clear in a Wall Street Journal interview, his idea for the film was to "kick in the pants the conversation about the economy and finance, the collapse, and regulation, and [make] people a little less intimidated by the subject."[74] The gaps in knowledge surrounding financial concepts that McKay exploited in order to produce a popular film are also, as some argue, the same gaps that contributed to the crisis in the first place. To fully understand this connection, a deeper discussion of pre-crisis subprime lending practices is required:

Despite acceleration in the housing market, the US economy fell into a brief, eight-month recession in 2001.[75] The US Federal Reserve, under the direction of Alan Greenspan at the time, responded to the slump in economic activity with unprecedented levels of "easy-money policy," and by 2003 the US federal funds was a mere 1%, marking a 45 year low.[76] With the expectation that home prices would continue their upward clime and that low market interest rates would remain at record lows, mortgages were made increasingly more affordable and widely available. Simultaneously, numerous innovations in mortgage finance also gained popularity, one of these innovations being subprime lending.

Subprime home loans were offered to "riskier than normal" homebuyers who had low credit scores and unpredictable, or in some cases non-existent, incomes.[77] Prior to the mid-1990's subprime loans were exceptionally rare, with less than one in twenty mortgages issued qualifying as subprime in 1994.[78] But by 2006, when the housing boom finally peaked, one out of every four newly issued mortgages was considered subprime.[79] What was once a relatively niche aspect of the mortgage market had quickly grown to account for a disproportionately large share of overall mortgages within the US economy.

But why and how did the bubble form in the first place? Easy monetary policy certainly played an amplifying role, but intense competition and fraudulent lending practices did too.[80] A widely read and cited research report published by the International Monetary Fund in 2008 "links the subprime mortgage crisis to the decline of lending standards associated with the rapid expansion of the this [subprime] market."[81] The IMF report argued the crisis "is linked to a decrease in lending standards, as measured by a decline in loan denial rates and a significant increase in loan-to income ratios, not explained by an improvement in the underlying economic fundamentals. Consistent with recent theories suggesting that banks behave more aggressively during booms than in tranquil times, the size of the boom mattered. Denial rates declined more and loan-to-income ratios rose more where the number of loan applications rose faster."[82]

Before the Crisis began to take hold, the concept of widespread subprime mortgage lending and the subsequent securitization such lending allowed for had appeared a "win-win" to all parties involved. Purchasing mortgage origination companies directly, large financial institutions were granted nearly unlimited, and lightly regulated, access to the "raw materials" needed to keep the issuance of lucrative mortgage backed securities (MBSs) ongoing. For example, prior to its collapse Bear Stearns owned EMC mortgage—one of the markets most aggressive mortgage originators.[83] In 2008, EMC agreed to pay $28 million dollars to settle claims made by Federal Trade Commission, arguing EMC "misrepresented the amounts borrowers owed, charged unauthorized fees, such as late fees, property inspection fees, and loan modification fees, and engaged in unlawful and abusive collection practices."[84] Today, EMC Mortgage operates as a subsidiary of JP Morgan Chase and is headquartered in Lewisville, Texas.[85] Bear Stearns also had a significant presence in the subprime mortgage market specifically; the firm provided lines of credit to many subprime mortgage originators, including New Century Financial, which collapsed in March 2007.[86]

The securitization process allowed banks to repackage and redistribute risk more creatively in order to match institutional and individual investors' risk preferences. This practice of risk matching was not, and still is not, inherently dangerous. But overtime, the literal and figurative distance between 1) the borrowers who applied for and received mortgages, 2) the originators who reduced lending standards to grant the mortgages, 3) the banks who purchased the mortgages for the purpose of securitization, and 4) the institutions/investors who ultimately held the securities (exposed to default and prepayment risks), grew so great in size and so overly complicated, that the result was a financial meltdown.

Easy monetary policy and subprime lending practices were not the only issues behind the 2008 Financial Crisis. For a more comprehensive account—one that refreshingly avoids over-blaming and shaming specific individuals, be they politicians or corporate executives—of the various causes and contributing factors of the Crisis, Alan S. Blinder's book, *After the Music Stopped*, proves useful. The former vice chairman of the Federal Reserve Board and an Economics professor at Princeton, Blinder focuses on the following seven root causes: inflated asset prices, excessive leverage (within the financial sector and economy as a whole), "lax" financial regulation, disgraceful banking practices (like decreased subprime lending standards), a crazy "quilt" of unregulated securitizes and derivatives, abysmal performance of rating agencies, and perverse compensation systems.[87]

Note the phrase "financial literacy" is not included in Blinder's list of seven causes. And this paper, unlike others previously published, does not take issue with this purposeful omission.[88] The Financial Crisis did not occur simply because the majority of American consumers could not, and still cannot, answer basic financial concept questions like those outlined in Chapter I of this paper. However, like the World Bank's cross-cultural study (discussed in Chapter II) found, banks treat consumers differently depending on their perceived level of financial literacy and ability. An individual lacking even a basic understanding of risk, repayment, and compounding interest—all concepts necessarily involved in the issuance of adjustable rate mortgages which were so commonly offered to subprime borrowers—is significantly less likely to ask the right questions, adequately analyze their ability to afford the service or product being offered to them, and is therefore, at greater risk to be taken advantage of by financial institutions.

Prior to the Financial Crisis, nearly all bank accounts (regardless of size) were considered moneymakers for commercial banks.[89] But the same may no longer be true. According to Michael Paulos at the consulting agency Oliver Wyman, "before the crisis almost every bank account made money. Big accounts made money on the spread, and small accounts made money on the incident fees. You made money on all the accounts with interchange fees. All of that is either severely curtailed or completely gone."[90] Roughly 37% of all consumer accounts are estimated to cause US bank losses now.

So to mitigate unprofitable accounts, retail banks and credit bureaus have begun to use broader ranges of data to determine client creditworthiness and "bank-ability." This more flexible and accommodating approach means the poorest Americans may, for the first time, gain access to the stability, accountability, and security bank accounts offer. Records like rental payment data, mobile phone contracts, and utility bills can offer banks a window into a borrowers history of payments, even if potential customers may lack a credit score.[91] But consumers, and banks too for that matter, should remember to be cautious with respect to such a creative approach. Now, no decision is a consequence free decision; consumers need to be aware that even seemingly non-financial decisions may have implied financial consequences.

Putting the "Lie" in LIBOR

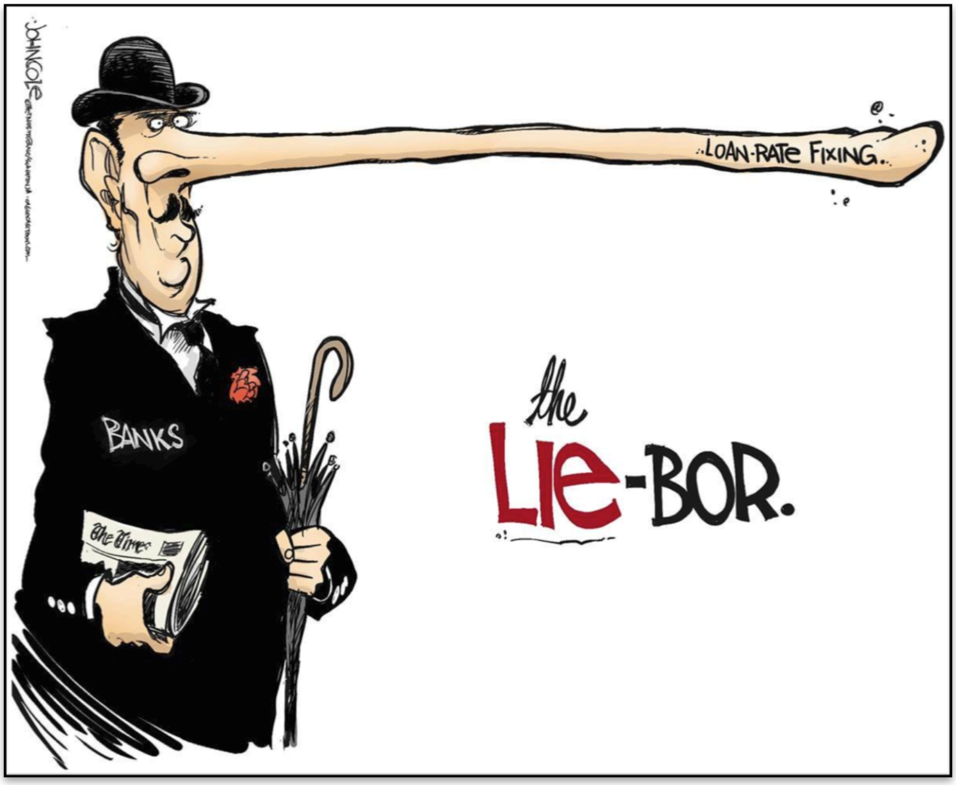


Figure 13: John Cole, The Scranton Times-Tribune (2012)

As significant research and McKay's adaptation of *The Big Short* helps to illuminate, banks had huge positions of risky investments and ill-understood contracts on their books in the years leading up to the Financial Crisis.[92] At the same time, these global banks lacked the liquidity, either in cash or alternative assets, necessary to fund their risky bets. When investors and institutions began to catch on, many of the biggest banks grew desperate to maintain the appearance of creditworthiness despite internal struggles.[93] Perhaps out of desperation, or simply because no one had caught them in the past, select groups of bank traders in the UK engaged in one of the most devastating financial manipulation scandals of all time: the LIBOR scandal.

LIBOR stands for the London Interbank Offer Rate. While the title makes the concept seem specific to a particular city and the banking industry, the rate has far reaching implications for citizens and their finances around the world, especially the United States.[94] So what exactly is it? LIBOR is a particular type of interest rate known as a "reference rate." Starting in 1986, the British Bankers' Association (BBA) has "referenced" the rate when determining the appropriate interest rate to charge for other forms of securities like mortgages. In practice, LIBOR is the rate of interest paid on a loan from one bank, private or public, to another. LIBOR is not the rate of interest a central bank charges. In the United States, the equivalent reference rate to LIBOR is the "Federal Funds Rate"—the rate at which US private and public banks (but not the Federal Reserve) lend to one another. It is important to note that LIBOR and the Federal Funds Rate are highly correlated.

Technically, LIBOR is calculated as an average of the various submissions made by banks pre-selected by the BBA. All submissions are aggregated to Thomas Reuters and checked for gross errors before the official benchmark rate is calculated. The final rate excludes the four highest and four lowest submitted rates to yield an arithmetic mean rate. Since LIBOR is essentially what it "costs" a bank to borrow from a peer, the rate ultimately determines at what rate banks can lend their own capital out to customers while still guaranteeing profits. Most importantly, the LIBOR rate serves as a pulse check or overall health signal for global financial markets; if banks feel concerned with their ability to receive loans or repayment for loans written to other banks, they report high LIBOR values. On the other hand, if banks are confident about the liquidity and risk levels in the overall financial system, they report low LIBOR levels.[95]

So just how and why was the average American impacted by a bunch of British bankers concerned with firm reputation, personal wealth accumulation, job security, and bottom lines?

The simplest answer is that three of the most commonly purchased US consumer financial products are tied to LIBOR rates: mutual funds, adjustable-rate mortgages (ARMs), and student loans. In February 2012, when the scandal was under initial investigation, over $2.6 trillion of US dollars were invested in a variety of mutual funds containing LIBOR tied securities, like bonds. Mutual funds are typical investment vehicles for retirement savings and conservative investors and often contain large positions of short-term debt (bonds) tied to LIBOR rates. Additionally, the performances of fifteen large US mutual funds (containing combined assets of over $23.8 billion) were directly measured by comparing the funds' returns to the LIBOR rate. An artificially low LIBOR rate meant that these funds' returns were likely overstated.

The mastermind behind the LIBOR manipulation plot has since been revealed as Tom Hayes, a former trader who worked for the Swiss bank, UBS, in Tokyo and Citigroup in London. Hayes convinced fellow employees, like Mirhat Alykulov, and traders at competing banks, like Royal Bank of Scotland (RBS), Barclays, and Deutsche Bank, to collude, and the group later became known as the "Spider Network."[96] Beginning in 2006, this group of traders colluded to increase personal and firm profits by submitting inaccurate LIBOR bids. Ultimately the United Kingdom's Financial Services Authority fined the banks involved upwards of $450 million each. The impact of such deceitful actions and the resulting fines will continue to impact even the most financially literate of consumers, investors, and shareholders for years to come.

Accounting for Wells Fargo Fraud

Figure 14: "Wells Forgery," Clay Jones, 2016

To reveal yet another example of when issues related to financial literacy and deception made global headlines, fast forward eight years to the Wells Fargo fraudulent account scandal. On September 8, 2016, the Consumer Financial Protection Bureau fined Wells Fargo Bank $100 million after determining the firm "(1) opened unauthorized deposit accounts for existing customers and transferred funds to those accounts from their owners' other accounts, all without their customers' knowledge or consent; (2) submitted applications for credit cards in consumers' names using consumers' information without their knowledge or consent; (3) enrolled consumers in online-banking services that they did not request; and (4) ordered and activated debit cards using consumers' information without their knowledge or consent."[97] Wells Fargo employees claimed in court that the bank set sales goals and implemented sales incentives, including an incentive-compensation program, that were often unattainable in order to distinguish itself as the industry-leading “cross-selling” bank.

In May of 2015, the Los Angeles city attorney filed a sweeping suit against Wells Fargo over potential account fraud. Later, on September 26, 2016, two former Wells employees also sued the company and claimed they “were either demoted, forced to resign, or terminated” for failing to reach the impossibly high sales goals. The next day, Wells Fargo Bank’s CEO, John Stumpf, announced he would continue to lead the company while a congressional investigation began, however, he would temporarily forgo his annual salary, bonus, and an additional $41 million in compensation.[98]

But on October 11, the *New York Times* revealed that as early as 2005, a Wells Fargo secretary named Julie Tishkoff wrote a letter to the firm’s human resources department to complain about “employees opening sham accounts, forging customer signatures and sending out unsolicited credit cards.” Julie Tishkoff was fired in 2009. Tishkoff was apparently not alone in attempting to report the fraud, and in 2011, two other employees wrote directly to the CEO, John Stumpf, himself. Despite Stumpf’s previously mentioned selflessness, internal company and public outrage mounted, and the bank announced his termination on October 12. Almost immediately, Wells Fargo launched a mass marketing campaign—featuring the iconic “horse-drawn carriage motif”—to regain public trust.”[99]

Wells Fargo’s own internal analysis found that its employees opened 1,534,280 unauthorized deposit accounts through the “stimulated funding” operations, where funds were transferred from customers existing accounts without their knowledge.[100] Roughly 85,000 of these accounts incurred over two million dollars in fees from overdrafts and monthly maintenance charges related to minimum balances. Wells employees also submitted applications for 565,443 credit-card accounts, of which 14,000 incurred $403,145 in fees from over-draft protection and interest charges, again, all without authorization.[101]

It is important to note, that like the LIBOR case, the connection between financial literacy and Wells Fargo's corporate fraud is not immediately apparent. Employees and senior management policies, not consumers, were ultimately to blame. As investigations are still ongoing, it is unclear whether or not consumers could have or should have noticed the suspicious activity before internal employees brought the scandal to light.

However, what the scandal does make abundantly clear is that conflicts of interest and shrouded information are inescapably a part of the financial industry. Even institutions that market themselves as protectors of personal finances are not, necessarily, trustworthy. The scandal demonstrates the unfortunate truth that consumers must actively defend their own finances from the very institutions intended to safeguard them in the first place. Truly understanding what products and services customers have subscribed to, monitoring suspicious account activity and charges, and realizing just what actions to take and rights to defend in the case of a violation could have potentially prevented, or at least mitigated, the depth and length of the Wells Fargo scandal.

Advocating on the Behalf of Consumers

Chapter II of this thesis highlighted efforts, like those by the Jump$tart Coalition, to advance American financial literacy. One of these efforts included the 2016 Jump$tart Educators Conference, made possible by donations from "generous underwriters" like Wells Fargo and Experian. Besides their philanthropic commitment to advancing financial literacy, both of these firms were also recently fined millions of dollars for financial misconduct. In each case, the government agency responsible for gathering information about the respective corruption, communicating the fraud to the general public, and ultimately fining each institution was the same: the Consumer Financial Protection Bureau (CFPB). As previously discussed and widely publicized in the press, Wells has been fined over $185 million for its fraudulent account-opening practices. The bank's losses will likely continue to compound as additional details become known, trust is deteriorated, and customers (at least the financially literate and proactive ones) begin to relocate their business elsewhere. And while its fraudulent practices may have escaped the same level of press attention, the other generous underwriter of the Jump$tart conference, Experian, was also fined three million dollars on March 23, 2017 for "Deceiving Consumers in Marketing Credit Scores."[102]

One of the nation's three largest credit-reporting agencies, Experian markets, advertises, sells, and offers credit scores, reports, monitoring, and other products to consumers and third parties. The company developed its own proprietary credit-scoring model called a "PLUS Score" which it sold directly to consumers. However, the PLUS Score is merely an "educational" one and is not officially used by registered lenders to make credit decisions. As the CFPB successfully argued, Experian directly violated US federal law (established in the passing of the Dodd-Frank Wall Street Reform and Consumer Protection Act) when it deceived customers into believing the PLUS Score was the same as those used by lenders. Furthermore, the CFPB found Experian to be in violation of the Fair Credit Reporting Act, requiring all credit reporting companies to provide free credit reports ever twelve months through a centralized site (AnnualCreditReport.com).

Both the Wells Fargo and Experian cases prompt natural questions—who is this watchdog-like enforcer known as the Consumer Financial Protection Bureau, and from where does the agency secure its authority to impose such serious, albeit crucial, penalties?

On December 11, 2009, the US House of Representatives passed a 1,279-page regulatory reform bill, the *Wall Street Reform and Consumer Protection* Act, by a vote of 223 to 202, with no Republican support.[103] In 2010, the US Senate drafted its own version of reform, the *Restoring American Financial Stability Act of 2010*. On June 30, 2010, the US House approved a reworked version, now entitled the *Dodd-Frank Wall Street Reform and Consumer Protection Act* (or Dodd-Frank), and the Senate's approval followed two weeks later.

Central to the legislation was the establishment of systemic risk regulation, non-bank resolution authority, consumer watchdogs, and more aggressive regulatory frameworks for derivatives and securitization.[104] Despite the bill's massive size and scope—resulting in over 520 new rules, 81 commissioned studies, and 93 reports—the legislation left many specific stipulations, definitions, and regulatory implementation details up to the Executive Branch and relevant regulatory agencies like the Treasury Department, the Federal Insurance Deposit Corporation (FDIC), the Commodity Futures Trading Commission (CFTF), and the Securities and Exchange Committee (SEC). Dodd-Frank also established a new government agency altogether: the Consumer Financial Protection Bureau (CFPB).

The CFPB's jurisdiction includes banks, credit unions, payday lenders, securities firms, mortgage-servicers, foreclosure relief firms, debt collectors and other financial institutions. The Bureau's self-declared priorities are mortgages, credit cards, and student loans.[105] In its current form, the CFPB exists primarily to regulate commercial finance markets, accept complaints directly from the American people, and fulfill congressional mandates for research and education.[106]

As a part of this educational mandate, the CFPB has published four "Financial Literacy Annual Reports" to highlight innovative research and current strategies used to educate and empower American consumers.[107] The 2016 Annual Report reiterated the essential nature of financial education and, for the first time, offered a formal definition of "financial well-being." According to the Bureau, financial well-being refers to "a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow them to enjoy life."[108] The definition serves as an important reminder that financial education is not a stagnant effort because individuals financial needs and goals are highly evolutionary and personal. For example, a persons life-cycle stage, tolerance for risk, level of ambition, perspective on work-life-balance, standard of living, and cultural values all contribute to their own, unique outlook on what successful financial management looks like.

In addition to proposing, for the first time, this comprehensive and flexible definition of financial well-being, the 2016 CFPB report reinforces findings previously represented in this report—like the SP500 Global Financial Literacy Survey, the National Federation for Credit Counseling, the President's Advisory Council on Financial Literacy, Jump$tart data, and FINRA's report on National Financial Capability. For example, in 2015 the CFPB found that over half of American adults have indicated no form of savings cushion to protect themselves or their families for three months in case of emergency.[109] Despite the fact that over half polled were presently concerned with running out of money in retirement, more than fifty percent had yet to estimate how much they actually needed to save for retirement.[110] Similarly, many

Americans admitted to price shopping before purchasing a car, but few conducted comparisons on loan prices or terms of their auto loans.[111]

While the Bureau was created in the aftermath of the Crisis, it is important to note that the CFPB does not exist out of a belief that the average American should fully understand highly complex financial instruments like Collateralized Debt Obligations, Credit Default Swaps, high-risk mortgage backed securities (MBS), or how algorithmic hedge funds operate. However, in improving baseline financial literacy levels, the CFPB "seeks to support financial decisions today in a manner that will develop and sustain skills for future decisions and lay a foundation for future financial well-being." Because when people understand the basics, they are less likely to take a passive approach to personal finance, less likely to spend beyond their means, and more likely to ask key questions, develop a healthy sense of skepticism, and accomplish their financial goals.

The future of the CFPB is uncertain. The CFPB is technically an independent government agency nestled within another independent agency.[112] The CFPB's Director, currently Richard Corday, is insulated from Presidential appointment and removal. The CFPB's annual budget, $606 million (FY 2016), is funded by the Federal Reserve, not Congress. In an article covering the recently intensified congressional debate over the future fate of the CFPB, CNN Money reporter Matt Egan argued that "Wall Street hates the CFPB and Republicans say the bureau's independence—it's not funded by Congress and is run by a single director who doesn't serve at the pleasure of the president—makes it a 'rogue' agency."[113]

Yet for many on the other side of the aisle, like Senator Elizabeth Warren, widely viewed as the Bureau's "founding mother," this independence and distance from political pressure was considered one of the key characteristics necessary for successfully establishing the CFPB."[114]

The majority of support for establishing the CFPB in the first place, as well as its continued existence, comes from groups and lobbyists associated with the Center for Responsible Lending, the National Association of Consumer Advocates, AARP, US PIRG—the federation of state Public Interest Research Groups—and Americans for Financial Reform (AFR), which represents a coalition of over 200 national and state consumer, housing and labor groups. These groups, like Warren, argued that financial industry reform should be modeled off a similarly independent consumer protection agency, the Consumer Products Protection Agency (CPPA). The CPPA is responsible for regulating the safety of consumer products and services, and a financial regulator replicating its independence model would allow for long-term, un-biased, and politically insulated protection from predatory financial practices.[115] According to Warren, "It is impossible to buy a toaster that has a one-in-five chance of bursting into flames and burning down your house. But it is possible to refinance an existing home mortgage that has the same one-in-five chance of putting the family on the street—and the mortgage won't even carry a disclosure of that fact to the homeowner."

It should come as no surprise that the current Administration has taken a negative, although simultaneously inconsistent, view on financial regulation and the CFPB. The President and his Press Secretary have publically denounced the CFPB, calling the Bureau an example of "disastrous policy" and an "unaccountable and unconstitutional agency."[116] Despite the fact that Dodd-Frank legislation limits the President from firing the CFPB's director without "cause, " President Trump would like to see Richard Corday fired immediately. Gary Cohn, Trump's top economic official, confirmed that the President plans to "attack all aspects of Dodd-Frank," presumably targeting the CFPB as well. However, the Trump appointee actually responsible for the Bureau's funding tells a different story. During his confirmation hearing before the US

Senate, former Goldman Sachs banker Steve Mnuchin was asked about his views on controversial issues like the Volcker rule, Glass-Steagall, and the future of the CFPB. While he disagrees with the CFPB's source of funds, Mnuchin believes the CFPB should continue to exist and protect the interests of the American public.[117]

Now is an appropriate time to reconsider the scope of this paper. This is not a paper about the history, legality, or overall effectiveness of the loaded "R-word," financial regulation. This paper does not take a definitive stance on whether the Consumer Financial Protection Bureau should have been created in the first place, who should direct it, or who should pay for its continued existence. This paper is about financial literacy. And the fact that the CFPB aggregates and publishes a wealth of accessible, easy to understand, and unbiased information that Americans can trust cannot be left unmentioned in a study of modern American financial literacy. For example, when an individual searches "How to apply for a mortgage" on Google, over 117 million results appear. Of the links listed on the first page of responses, two hyperlinks direct consumers to Chase, two to LendingTree, one to Bank of America, three to Wells Fargo, two to Bankrate.com, yet only one links to a not-for-profit, non-financial institution: the CFPB.

CONCLUSION

Now more than ever, American consumers must approach personal financial management as both a proactive and defensive endeavor. The sheer number and complexity of available financial instruments and intermediaries is rapidly increasing, while at the same time, individuals are left increasingly responsible for their own personal financial security. Financial literacy has never been more important than it is today.[118]

Improved financial literacy is a first and necessary step for identifying various financial goals, making informed financial decisions, fairly evaluating the financial marketplace, responsibly contributing to the health of the US economy, and safeguarding ones personal finances. Regardless of socioeconomic status, profession, or affinity for wealth accumulation, possessing a solid understanding of both financial concepts and the financial industry as a whole proves crucial. In the modern era, consumers have unprecedented access to both a wealth of financial information and customizable financial products. Whether an individual simply relies on personal experience or learns about basic financial concepts in school, the workplace, the media, or financial institutions themselves, does not change the fact that consumers are expected to command increasingly more responsibility over their own finances.[119]

Given a growing body of evidence—the SP500 Global Financial Literacy Survey, FINRA Financial Capability Study, and the National Report Card for Financial Literacy, to name a few examples—suggesting Americans are under-informed and ill-equipped to face basic financial challenges, it is natural to conclude that nothing is done to combat low financial literacy levels in the United States. Yet to assume the poor state of American financial literacy necessarily implies a lack of organized action is neither fair nor accurate.

Fortunately, within the past ten years (and largely out of response to the Financial Crisis), various public and private institutions have started to view financial literacy as an issue of national importance. Even though many may not be aware, meaningful steps to advance the conversation about America's financial literacy problem have been taken: The Fair and Accurate Credit Transactions Act, Executive Order 13455, National Financial Literacy Month, the Jump$tart Coalition, the Champlain College Center for Financial Literacy, and the Consumer Financial Protection Bureau's Office of Financial Education are all proof of such increased efforts.

Unfortunately, most of these efforts are relatively new, unpublicized, uncoordinated and unstandardized; as a result, many attempts to improve financial literacy have yet to produce meaningfully or measurable results. Greater emphasis and research should focus on determining the most effective methods for educating American youth about basic financial concepts and the financial industry in general. As the number of student loans issued continues to grow and the size of millennials credit card debts does too, the financial education conversation should be broadened to include college students too. Equipping future generations with a strong financial foundation, which can be built upon throughout the rest of their financial lives, is paramount for both an individual's financial success and the overall growth of the economy.

The average high school senior does not apply for a mortgage, refinance their home, purchase a life insurance policy, or monitor investment accounts. Financial decisions grow more numerous and complicated throughout ones life. But there is no disputing the fact that consumers of all ages and backgrounds are forced to make countless financial decisions, from purchasing a car to a buying a $4.99 latte, on a daily basis. The millions of dollars spent per year—on targeted ads, real and fake news articles, and other financial institution promotions intended to influence consumer savings and expenditure patterns—confirms this fact. Consumers of all ages deserve the chance to be as informed as possible.

What the Financial Crisis, the LIBOR Scandal, and Wells Fargo's account fraud make clear, is that Wall Street and Main Street are not quite as far away from each other as many assumed, and preferred, them to be. These real-world examples also prove that even the most financially literate, sophisticated consumer is not entirely insulated from egregious, fraudulent, and risky practices so commonly observed in the financial industry. One can know the definition of LIBOR and monitor the fluctuations of their investment accounts with unrivaled diligence, yet still be the victim of corporate corruption and collusion; consumers can pay down credit card debt, increase their annual savings, and utilize online budgeting tools but still be charged hidden account fees beyond their control.

Ultimately, government agencies—responsible for researching effective strategies to combat financial illiteracy, aggregating and promoting the numerous, often scattered, resources and efforts of other interested organizations, and advocating on the behalf of consumers in instances of widespread corruption—like the Consumer Financial Protection Bureau, play a controversial, but critical role in the fight for American financial literacy.

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BIOGRAPHY

Charlotte Gunn was born and raised in Dallas, Texas, on January 13, 1995. She attended The Hockaday School, a college preparatory and boarding school for girls, for a total of thirteen years. Upon graduating in 2013, she enrolled at The University of Texas at Austin's College of Liberal Arts and the McCombs School of Business as a Plan II and Finance double major. Following her sophomore year, she attended the London School of Economics for a summer session. While at UT, she served as the treasurer and president of the Iota Chapter of the Chi Omega Sorority, volunteered with the Plan Tutoring-KIPP Austin partnership, and was a member of the McCombs Leadership Program. Ms. Gunn interned in the Dallas office of a management-consulting firm and plans to travel extensively before starting work as a full-time Associate Consultant in the fall of 2017.